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THE OPERATIVE CORRECTION OF UTERINE RETRODISPLACEMENTS.*

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NEW YORK.

I would seem unappreciative of the compliment you have paid me and the institution I represent if I failed to acknowledge the pleasure with which I accepted your Chairman's courteous invitation to attend this meeting of the Louisiana State Medical Society. Having visited some of the clinics in New Orleans on a previous occasion, familiarized myself with the superlative character of your professional activities, and developed a friendly contact with several of your distinguished obstetricians and gynecologists, I am particularly grateful for the privilege of participating in your program, and thank you for it.

Retroversion of the uterus implies a turning backward of the entire organ, without any break in the alignment of the cervical canal and uterine cavity, whereas in retroflexion the fundus is sharply angulated on the cervix at the uterine isthmus. For convenience, the term retrodisplacement is used to apply to both retroversion and retroflexion. The best treatment for these pathological conditions is prophylactic, and this involves precautionary measures and sensible therapy during pregnancy and the puerperium, as well as re-examination of the patient three and twelve weeks after parturition. The normal positon of the uterus is maintained by the upward pressure of the perineal musculature, firm tonicity of the supporting ligaments, and the dynamics concerned in the exertion of intra-abdominal pressure on the posterior surface of the fundus. Hence, most early cases of acquired retrodisplacement can be cured by prompt recognition, repair of perineal lacerations, bimanual reposition of the uterus, and the insertion of a properly fitting pessary.

Many retrodisplacements have followed such simple operations as curettage and trachelorrhaphy, because the cervix has been pulled down to the introitus, dragging the uterus into the axis of the vagina, and the operator has neglected to replace the uterus bimanually. The cervix should always be pushed well back in the pelvis after such operations and kept high up in the vaginal fornix by packing a strip of iodoform gauze firmly into the vagina.

The large number of women coming under my observation who had been operated upon by others for the replacement of a dislocated uterus, with excellent anatomic results but without symptomatic relief, is the chief reason for this presentation. In fact, nothing but the current diversity of ideas and variations in practice on the part of pelvic surgeons justify the re-submission for discussion of so hackneyed a topic as the surgical treatment of retroversion and retroflexion of

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the uterus. The necessity for abbreviation precludes elaborate consideration of the details of etiology, prophylaxis, symptomatology, and non-operative therapy, notwithstanding their importance. It is essential, however, to postulate certain criteria which I believe should influence the gynecologist in formulating his indications for surgical intervention and for modification of operative technic: (1) retroversion and retroflexion, congenital or acquired, do not initiate symptoms *per se;* (2) operative reposition of congenital displacements is useless; (3) the symptomatology of version and flexion is often closely simulated by colonic stasis, posterior parametritis, flat feet, loose sacro-iliac joint, focal infection, etc.; (4) the real cause of symptoms excited by apparently uncomplicated uterine displacements is passive congestion; (5) the age, marital state, parity, child bearing potentialities, and vital resistance of the patient should be carefully reviewed before urging laparotomy or committing one's self to a particular operative procedure; (6) an artificially immobilized uterus before the menopause is pathologic, irrespective of its position, and may be the source of future trouble; and (7) an elective operation which fails to afford symptomatic relief is a total failure. These premises constitute the basis for the argument I have to advance.

All experienced gynecologists have discovered congenital retrodisplacements accidentally in nulliparous women. They are characterized by hypoplasia of the pelvic organs, almost complete uterine immobility, short anterior vaginal fornix, and short anterior cervical lip. Such developmental defects never cause pelvic symptoms. Associated menstrual disturbances, if they occur, are due to the hypoplasia, intrinsic histologic features, and coexisting endocrine imbalance, and not to the retroflexion. The futility of an alteration in the position of the uterus under such circumstances is obvious. Again, one has but to recall the insidious and oft-times long delayed onset of symptoms in cases of acquired retroversion, to become convinced that, if the annoyances were due to the displacement itself, their occurrence would be simultaneous with the precipitation of the malposition, rather than post-dating it. In the latter cases, when the uterus is replaceable bimanually, the symptoms are usually due to gradual distention of the walls of the broad ligament veins and passive congestion. On the other hand, if the uterus is immobilized, the symptoms are caused by complicating factors, such as pelvic adhesions, posterior parametritis, adnexal diseases, etc. But it is essential to bear in mind that an overloaded colon tugging on its mesentery, flat feet, loose sacro-iliac joint, and focal infection may all cause sacral backache, pelvic fulness, dragging sensation, malaise, and local pain, and exact differential diagnosis is of paramount importance. The number of patients relieved of their complaints after a series of enemas and intestinal cleansing, or vaginal packings with strip gauze and glycerine, or both, despite the persistence of a uterine retrodisplacement, is remarkable.

Every laparotomy for the suspension of a displaced uterus is an elective and not an emergent procedure, and should not be advised unless the hazards involved are minimal, all palliative measures have been exhausted, and subsequent good health and comfort can be honestly anticipated.

I have said on a previous occasion that I do not believe it proper for one to assume the responsibility for another's failures or to appropriate his successes in compiling statistics. I shall not therefore include a mass of figures from the entire gynecological service of the New York Post-Graduate Hospital, but simply utilize the records of some recent personal cases. I found that in my last 1200 operative cases, previous to January, 1931, I had done some form of operation for uterine retrodisplacement 180 times (Table I).

TABLE I.

Surgical Procedures for Retrodisplacement of the Uterus in 1200 Consecutive Pelvic Operations.

Baldy-Webster suspension	40
Crossen's modification of Gillian suspension	108
Kelly ventro-fixation	25
Mann's plication of round ligaments	3
Olshausen suspension	3
Coffey plication of round and broad ligaments	1
Total	180

Of course, all of the operations were supplemented with whatever vaginal plastic repair may have been necessary.

The small number of Baldy-Webster suspensions, 40, is an index of the relatively few patients operated upon for an uncomplicated retrodisplacement, since I regard this technic as the preferable operation, whenever it can be judiciously selected. The reasons for the few in this group are: First, I do not operate upon women under 35, if they can possibly be kept comfortable otherwise; second, the palliative use of a well adapted and properly fitting pessary usually permits deferring operation until after several pregnancies; and third, I regard a large, heavy, subinvoluted corpus, any adnexal involvement requiring salpingo-oophorectomy, or markedly attenuated round ligaments, as contraindications. The Baldy-Webster operation is deservedly popular because it is easy to perform and because it interferes less with subsequent pregnancy and parturition than any other corrective precedure. Unfortunately, these same merits have often been responsible for its misapplication. It has been done too often when no operation was imperative, or when the utero-ovarian ligament has been severed on one or both sides. The intact utero-ovarian ligament, tube, and ovary are the only sturdy structures capable of exerting counter-pressure against the pull of the transplanted round ligaments on the thin broad ligament leaves (Fig. 1). It is apparent that if the utero-ovarian ligament is

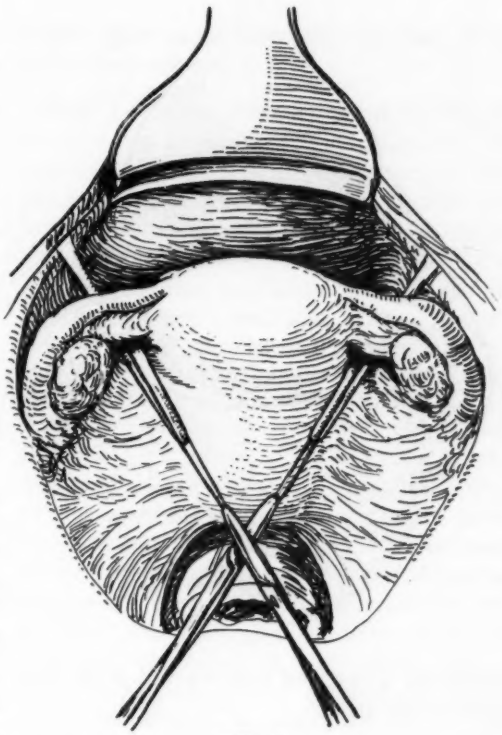

Fig. 1

cut, as it must be when salpingo-oophorectomy is done, the broad ligament will soon yield to the tension and recurrence is inevitable. In some cases the transplanted ligaments have served as a fulcrum for prompt recurrent retroversion rather than as a support for anteversion, because the surgeon neglected to suture the ligaments sufficiently high on the posterior surface of the fundus. It is important to remember that the center of uterine gravity is considerably above the mid-point on the imaginary line extending from the cervical portio to the top of the fundus (Fig. 2). The Baldy-Webster operation is ideal for the patient who has a replaceable uterus and has worn a pessary with relief of symptoms, thus demonstrating to both patient and physician that the symptoms have been due to the displacement and nothing else, and that maintaining the uterus in its normal position will effect a cure. Incidentally, when this operation is

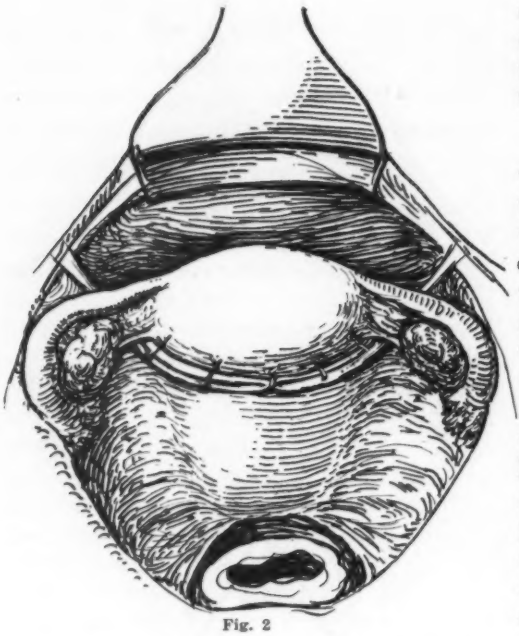

Fig. 2

employed, prolapsed ovaries are well elevated in the pelvis.

The large number of instances, 108, in which Crossen's modification of the Gilliam suspension was done indicates the high incidence of concomitant adnexal disease in the patients subjected to operation for retrodisplacement. Almost without exception salpingectomy or oophorectomy, or both, were necessary, or the uterine corpus was so large and heavy that the Baldy-Webster operation seemed unwise. In my experience, the Gilliam operation has been found to cause little trouble during gestation or delivery and is therefore usually my second choice in women before the menopause. In the early months of a succeeding pregnancy, some patients complain of soreness in the region of round ligament attachment on either side of the linea alba, but this is transitory and of little consequence. In only one case has the operation been responsible for serious dystocia during labor. Crossen's modification of Gilliam's original technic eliminates the artificially created dead space on either side of the round ligaments (Fig. 3), and intestinal obstruction has not followed in any of my cases, so far as I know. It is applicable irrespective of the presence of adnexa or the degree of subinvolution.

Ventro-fixation of the uterus (Kelly) was performed 25 times in women past the menopause when the round ligaments were so short and thick that a Crossen operation could not be done easily, when the rapid removal of adnexal masses after extensive vaginal plastic work was so easy that hysterectomy did not seem to be warranted, or when advantageously combined with a Crossen suspension in cases in which the uterus was prolapsed to the first degree. I have not done a Kelly ventro-suspension since 1907, and believe it to be an unsurgical procedure. As a matter of fact, the intended suspension usually terminates in a fixation, or the artificially created false ligament so stretches that recurrence is inevitable.

Mann's plication of the round ligaments was utilized in three cases in which the condition seemed ideally adapted to it: uterus small and not to be sacrificed, both

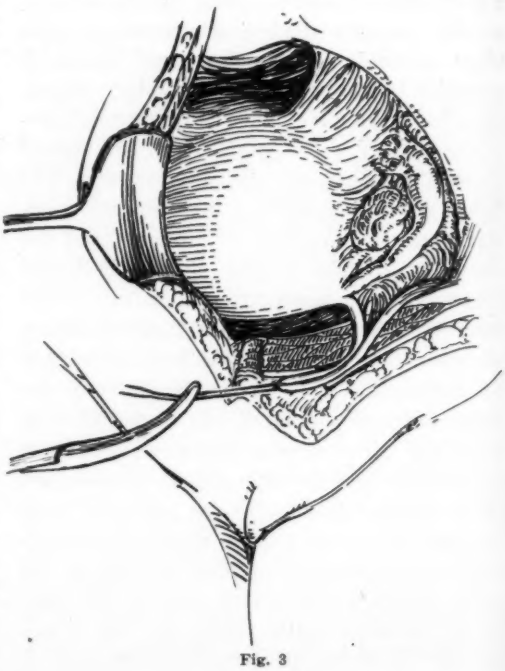

Fig. 3

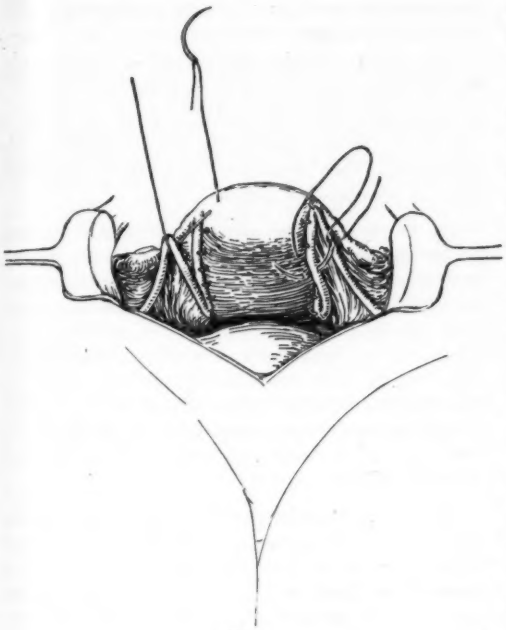

Fig. 4

tubes removed, and round ligaments unusually long but not much thinned out. It served its purpose well each time.

Olshausen's suspension was also employed on three occasions in elderly women, when it seemed desirable to attach the uterus near some particular point on the abdominal wall and when speed was important after other prolonged operative procedures. Except under unusual circumstances, I do not favor this technic, as it tends to immobilize the top of the uterine fundus, and may interfere with subsequent proper bladder expansion.

Coffey's plication of the round and broad ligaments (Fig. 4) proved very useful and satisfactory in one case in which the tubes had been extirpated previously, and the greatly attenuated round ligaments were almost lost in the reduplicated folds of overstretched broad ligaments.

Shortening of the utero-sacral ligaments was combined with several of the above operations, when the cervix was found too far forward in the pelvis, but was never relied upon exclusively for the cure of a retrodisplacement.

The Alexander-Adams operation should be relegated to the background forever. It requires two incisions in the abdominal wall instead of one, affords no opportunity for intraperitoneal exploration, is sometimes attended by technical difficulties when the round ligaments are thin and hard to find in the inguinal canal, and carries a high percentage of unsatisfactory results.

Finally, I would venture the suggestion that the multiplicity of operations devised for the surgical replacement of a retroverted or retroflexed uterus is not testimony of the uselessness of all of them, as some of our general surgeon colleagues have intimated, but is rather evidence of appreciation on the part of discriminating and conscientious gynecologists that no single technical procedure is universally applicable. Failures do not necessarily represent lack of skill in execution; they often result from immature surgical judgment or personal prejudice in favor of a particular operation.

DISCUSSION.

Dr. C. Jeff Miller (New Orleans): I want to emphasize in the beginning the point made by Dr. Dannreuther, that the fact of the uterine displacement is not at the bottom of trouble that exists. We pay too much attention to the uterus, too little attention to the other factors in the case.

I want also to stress the value of pessaries. A few years ago any gynecologist who acknowledged that he used the pessary was considered an old fogy, but fortunately times are changing and our patients are better for it. I don't know of any condition which requires more careful differentiation of cases than uterine retroversion requires, or any condition in which we should be more cautious in saying that surgery is necessary. In the cases in which we suspect it is, a preliminary test with the pessary will soon settle the question of whether or not replacement will end the symptoms.

Dr. Dannreuther is quite correct in stressing the careful selection of cases of congenital origin for surgery. Retroflexion in the nullipara is practically always of congenital origin and

surgery is frequently of no avail, for local surgery cannot cure the general defects which are the causative factors. I have never felt that I could approve of Graves' suggestion of suspension for congenital anteflexion, and the same argument holds for congenital retroflexion.

Time should always be taken to determine that other conditions do not exist which will make surgery of no avail. Low grade infections in the broad ligament are a particularly common caues for failure, and, since the surgery of retroversion is never emergency surgery, there should be a careful study of every case to eliminate these infections, as well as to eliminate sacroiliac strains and other causes of backache. We are seeing more and more backache these days, partly because women exercise more, partly because they have given up corsets, and it behooves us to recollect that only a small percentage of backaches can be attributed to retroversion.

Different surgeons prefer different operations. The Baldy-Webster technic is useful in carefully selected cases, but the selection is not always done carefully, and the technic is not as simple as many would lead us to believe it is. I have had to interfere in four cases in which this type of suspension was performed too low, and for that reason I cannot endorse it wholeheartedly. The Gilliam operation is rather unsound because it makes an actual suspensory ligament of the round ligament, which is really only a guy rope. Dr. Gilliam told me that after he had devised the operation, he watched the literature to see if intestinal obstruction would be reported from it, but never saw such a case. We know now that intestinal obstruction can follow it and that the danger is not a remote one. My own preference is for the Simpson modification of the Gilliam operation, combined with proper restoration of the pelvic floor, or rather, of the fascial structures of the pelvic floor, for direct repair of the muscular structures is neither necessary nor simple. For the entirely uncomplicated retrodisplacement in the multipara I like the Alexander operation, which obviates opening the abdomen, though I grant the difficulties of its performance. Ventral fixation has only a limited field, and is never indicated when the uterus has not undergone menopausal atrophy; if the organ is at all hypertrophied, removal is certainly the better plan.

Dr. E. L. King (New Orleans): I do not believe that retroversion in the nulliparous woman is a very frequent cause of sterility. I have seen many such patients but I hesitate about advising operations for such a cause, for the reason that often when you tell a woman she cannot become pregnant until she has some surgery done for her retroversion, she turns up with a pregnancy without any treatment whatsoever.

Moreover, I do not believe that the retroverted uterus gives very much trouble in the course of a pregnancy, for the reason that it rises out of the pelvis by the end of the third month and the pregnancy then continues normally. Incarceration is possible but not likely.

As to retroversion as a cause of the vomiting of pregnancy, again I am skeptical. I am willing, if the reposition can be effected without too much manipulation, to replace the uterus on the chance that the displacement may be responsible, but I have seen too many women with retroverted uteri who had no such symptom to look very kindly on the theory that it is at the bottom of the trouble. I cannot recollect a single case in which I have had reason to regret my policy of letting well enough alone.

Dr. H. W. Kostmayer (New Orleans): In my own work I try to remember that there are three chief uses for the pessary, palliative, curative and diagnostic. Because uterine retroversion can apparently be responsible for so much pathology and frequently is responsible for little, I entirely agree with the idea of using the pessary over a period of time to determine just how much benefit the patient is going to get from surgery. In fact, often after I have used the pessary, I remove it and put the uterus back into its old position, to see whether symptoms will recur. An elective operation which does not relieve symptoms is a total failure, and for that reason we must be particularly carful not to do needless surgery.

Dr. Walter T. Dannreuther (closing): I find that most of the men with whom I come in contact at the Post-Graduate Hospital in New York have little real knowledge of how to use a pessary in cases of retroversion. They often try to make it replace a dislocated uterus, wheras that is not its function; its sole purpose is to serve as a support after the uterus has been replaced by the doctor. The pessary has lost much of its former popularity because erroneous conceptions prevail concerning its indications and its application. The principles of its design are not generally understood, the technic of fitting an individual patient is seldom carried out correctly, and few physicians seem to realize that a pessary has no place in the treatment of any uterus which is not freely mobile, and which therefore cannot be replaced bimanually.

A difference of opinion is always interesting. Whenever a paper is presented and everyone agrees with the essayist, it is probable that the paper might better have been left unread. So I am glad that Dr. Miller and I are not in accord

regarding all details of the subject under discussion. Different operators favor various surgical correctional methods. For example, in Graves' clinic you will find enthusiastic advocates of the Olshausen suspension, while elsewhere some other procedure will be used in the majority of cases. The important point I tried to emphasize in my paper is that no single operative technic is adapted to all cases indiscriminately. I think that Dr. Miller had in mind the original Gilliam operation rather than Crossen's modification of it, which is very much like the Simpson modification he himself favors. In the first instance the perforation is made close to the internal ring, while in the other the ligament is pulled under the peritoneum from the ring itself.

ONE THOUSAND CASES OF UTERINE FIBROIDS IN THE NEGRO RACE.*

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NEW ORLEANS.

This paper is based upon a review and study of one thousand consecutive cases of uterine fibroids in the negresses operated upon in Charity Hospital, located at New Orleans, Louisiana, during the years of 1928, 1929 and 1930. Included in this compilation are all cases of fibroids operated upon and filed under the heading of fibroids in the record room, no attempt being made to single out our service or any particular gynecological service. However, cases that the operator did not diagnose post-operatively and the pathologist did not report as fibroids were not included.

Just why fibroids of the uterus should be much more frequent in the negro race than in the white race, I am unable to say. C. Jeff Miller of New Orleans, states: "that from one third to one-half of all the colored women over fifty years of age present this type of growth." Rudolph Matas, in 1896, found fibroids to occur five times more often in the negro race than in the white race. Peaslee, in 1872, stated: "that few negro women who died over forty at the house for colored incurables in New York were free from this disease." Curtis Rosser, in 1923, stated: "that fibroids in the negress appeared four times as often as in the white." Ballock, in 1894, called attention to fibroids being a process constituting a racial pecularity. John Hopkins autopsy records showed 33.7 per cent of all negresses over twenty to have had fibroids.

*Read before the Louisiana State Medical Society, New Orleans, April 14-16, 1931.

Table No. 1—Tabulation of Ages of Fibroids on Admission to Hospital.

Age Periods	Percentage
19-25 years	2.5
25-30 years	15.4
30-35 years	24.5
35-40 years	29.4
40-45 years	17.4
45-50 years	8.6
50-55 years	.3
55-61 years	.2
No Record	1.7
Youngest—19 years	
Oldest—61 years	
Largest one year period—38 years	8.8

The family history, the past history, the marital status, as well as previous operations were not considered as they were found to be rather confused, indefinite and of no particular value.

AGE.

The age of the patient as referred to in table No. 1, is often of importance in choosing the procedure for treatment of fibroids. In these cases there is always an element of uncertainty as to the correct age. Hysterectomy, myomectomy, radium and roentgen-ray are the methods of procedure. Each has its place, its known indications and contra-indications which are well defined. The advocates of hysterectomy will note that 24.5 per cent of all cases came in the period from 30 to 35 years; 29.4 per cent came in the 35 to 40 year period; 17.4 from 40 to 45 year period; 8 per cent in a single year period of 38. The advocates of myomectomy will note that 17.9 percent were patients under 30 years of age. The roentgen-ray and radium advocates will note that 9.1 per cent were over 45 years of age.

Table No. 2—Age Period Per cent of Beginning Menstruation.

Age Periods	Percentage
9 years	.2
10 years	1.7
11 years	3.4
12 years	15.2
13 years	26.9
14 years	20.2
15 years	14.2
16 years	5.9
17 years	1.4
18 years	1.5
19 years	.3
23 years	.2
No age given	8.9

COMPLAINT AND SYMPTOMS.

The complaint and symptoms, as noted in table No. 4, were divided into two groups, the first being of major importance and the second being of minor importance. Some had one complaint or symptom and others had several.

Pain—Much to my surprise pain headed the list with fifty-nine and eight tenths per cent. The pain may be independent of a menstrual period or limited to such time; it may be characterized as dull and bearing down or sharp and lancinating. The pain which is independent of menstruation is usually due to the pressure or pulling of the fibroid uterus upon the surrounding parts; as intestinal or omental adhesions or neighboring inflammatory processes as oophoritis, salpingitis or appendicitis. Fibroids free from adhesions and impaction give no abdominal pain; however, after the tumor attains a certain size it distends the abdomen and causes a feeling of fullness and difficulty of breathing.

Backaches—From a gynecological standpoint these may be due to pelvic congestion, adnexal disease or the involvment of the lymphatics from a cervical infection.

Leukorrhea—This symptom was noted in 32.1 per cent, of from a week to several years duration. Some complained of premenstrual leukorrhea, but the majority was during the menstrual interval.

Tumor—This was reported in 28.1 per cent of this series. The time interval of the tumor was from three weeks to fifteen years as noted in table No. 5. The one year duration had the largest percentage with 29 per cent plus. In some instances the patient discovered the tumor, in other cases they sought relief for some vague symptoms or trivial complaint and did not know they had a tumor until it was demonstrated to them by a physician.

Bleeding—Such a symptom was reported in 6.1 per cent but it will be noted that menorrhagia was complained of in 24.2 per cent, 22.5 per cent with metorrhagia. The largest per cent of bleeding was menstrual. I am under the impression that the 6.1 per cent was intermenstrual bleeding. As the low mentality of these cases is to be considered, it is hard to separate these symptoms. However, in the vast majority of cases, the menstrual function is in no way influenced by the fibroid. We have not the slightest hesitancy in saying that the uterine bleeding is due to the fibroid encoaching upon the uterine mucosa. No matter how large the fibroid, so long as the contour of the uterine cavity and the mucosa is not infringed upon by the fibroid, there will be rarely any disturbance of menstruation. From table No. 4, pain and tumor was 2.5 per cent; pain and bleeding 1.5 per cent; bleeding and tumor

Table No. 3—Age at Menopause

Age Period	No. of Patients
33 years (youngest)	1
34 years	1
36 years	1
37 years	2
39 years	1
40 years	2
41 years	1
42 years	1
45 years	2
46 years (largest number in single year period	6
47 years	4
48 years	2
50 years	2
60 years (oldest)	1

.7 per cent; pain, bleeding and tumor .2 per cent; constipation 26.2 per cent; dysmenorrhea 21.5 per cent. bladder symptoms 14.3 per cent; backaches 11.4 per cent; loss in weight 4.6 per cent; gain in weight .3 per cent; neuritis .5 per cent.

Constipation—This complaint was present in 26.7 per cent of from a few weeks to years. In many instances fibroids are the direct cause of constipation, especially when the tumor is of moderate size and is impacted in the pelvis. On the other hand, we see many cases of constipation without fibroids. When we consider the unbalanced diet and irregular habits of these patients, we wonder why there is not more constipation.

ASSOCIATED DISEASES.

Heart disease and hypertension—These show the highest percentage as noted in table No. 6. 17.7 per cent had a systolic presure over 150 m.m. of mercury, 1.9 per cent a systolic pressure of over 200 m.m. of mercury, 9.5 per cent some valvular lesion, making a total of 29.1 per cent that came under this classification. This does not include the cases of myocarditis, dilatations and hypertrophies. In Boldts series nearly fifty per cent suffered from cardiac palpitation and dyspnea; and exhibited murmurs and an increase or irregularity of the pulse rate. Winter, in 26 of his cases autopsied, noted brown atrophy, fatty degeneration and myofibrosis. In an analysis, he concluded that there were but five of these cases in which no other cause than fibroids could be explained for these changes. Winter, in another series in which an internist examined the patients before and after operation, found the heart normal in 60 per cent of the cases. 30 per cent of the cases, murmurs and impure tones were found, 6 per cent dilatations and hypertrophies without valvular or myocardial disease, 1 per cent there were valvular lesions and in 1 per cent myocardial disease. The follow up in these cases was sufficient to determine positively that the condition of the heart had been benefited by the operation. Almost all of the murmurs and impure tones had cleared up; while a large majority of the hypertrophies and dilatations had disappeared. Kelly and Cullen concurred in the findings of Winters. For these reasons, fibroids have supposed to extend a peculiar specific effect upon the heart which produces a degeneration of the cardiac muscle. It cannot be denied that advanced degeneration, infection and necrosis may produce toxins which cause a change in the cardiac muscle. A pathological state of the ovary may offer some explanation. The mechanical resistance of the fibroid or the exertion of the tumor upon the pelvic or abdominal vessels has been alleged to cause a cardiac dilatation and insufficiency. The veins of the pelvis and lower extremities are frequently dilated and enlarged from pressure and interference with return of the venous blood of the heart. These factors alone cause more frequent embolism and thrombosis than any other cause.

Table No. 4—Complaint and Symptoms.

Major	Percentage
Pain	59.8
Tumor	28.0
Bleeding	6.1
Pain and tumor	2.5
Pain and bleeding	1.5
Bleeding and tumor	.7
Pain, bleeding and tumor	.2

Minor	Percentage
Leukorrhea	32.1
Constipation	26.7
Menorrhagia	24.2
Dysmenorrhea	21.5
Metorrhagia	22.1
Bladder Symptoms	14.3
Backaches	11.4
Loss in weight	4.6
Neuritis	.5

Table No. 5—Tumor Duration

Year Period	Percentage
Less than one year	23 plus
One year	29.3 plus
1-5 years	32.5
6-15 years	11.4
Duration not known	.3

Syphilis—11.7 per cent of all cases operated upon had four plus positive Wassermanns. There were seventy-eight cases recorded as having been discharged with four plus Wassermann to receive antiluetic treatment before they were operated upon. These were not included in this tabulation.

Gel Horn of St. Louis, as well as Theilheiber, thinks there is some relationship between syphilis and fibroids. From our observation in this series, the convalescence of the patients with four plus Wassermanns were as good as those with negative. Wassermanns. Referring to table No. 6, tonsillitis was noted in .7 per cent, nephritis in 3.8 per cent, malaria in .5 per cent, asthma in .5 per cent, tuberculosis in .3 per cent, arthritis in .2 per cent, pyelitis in .2 per cent, diabetes in .3 per cent.

Table No. 6—Associated Diseases.

Diseases	Percentage
Hypertension:	
Systolic pressure over 150 m.m. and less than 200	17.7
Systolic pressure over 200 m.m.	1.9
Heart disease and hypertension (not included in above)	9.5
Syphilis (serum reaction basis for diagnosis)	11.7
Nephritis	3.8
Tonsilitis	.7
Malaria	.5
Asthma	.5
Tuberculosis, pulmonary	.3
Arthristis	.2
Pyelitis	.2
Diabetes	.3

BLOOD FINDINGS.

In table No. 7, in 45 red blood counts, the lowest was 1,750,000; the highest 5,250,000; an average of 3,692,911.

The 52 hemoglobin determinations (the Talquist Scale being used) showed the lowest hemoglobin was 20 per cent, the highest was 75 per cent, an average of 59.1 per cent.

The sedimentation time had an average of 54⅜ minutes in the cases recorded.

The average coagulation time in cases reported was 3 minutes and ten seconds.

Anemia—A secondary anemia is a common finding in patients with fibroids. This is the result of a profused menstrual or intermenstrual flow. Women with submucous fibroids are apt to loose large quantities of blood, and time and patience on both the part of the patient and the surgeon is necessary to put the patient in the proper condition for operation. Transfusion, the citrate method, was used before and after operation in several cases with splendid results. If operation is necessary with a marked anemia, the operation should be done as quickly and rapidly as possible; doing no more than is absolutely necessary to relieve the patient of the pathology. Donors should be at hand and ready for transfusion, if necessary. However, infusions of glucose and saline will often suffice for the time being.

FERTILITY, MISCARRIAGES, STERILITY.

Referring to table No. 8, there were 43 per cent of the patients that had borne full-term children; 57 per cent that had not borne full-term children; 35.9 per cent had never been pregnant; 18.8 per cent of the series had had only one child, the youngest of this group was 3 years, the oldest child was 37, giving an average of 18.8 years. By studying the table, you will note the greater the number of children, the less the number of patients; there was only one that had borne eleven children.

Miscarriages—These were classed in all cases up to eight months of pregnancy. This had to be done due to the fact that the menstrual history was rather indefinite and confused in a large number of cases. There were 37.1 per cent of the patients that had had 471 miscarriages.

Sterility—The relation between fibroids, fertility and sterility has long been a matter of much discussion. The question, however, is, whether fibroids cause sterility or whether sterility causes fibroids?

Table No. 7—Blood Work.

Red Blood Count:		
Lowest	1,750,000	
Highest	5,250,000	
Average	3,692,911	plus
Hemoglobin (Talquist Scale):		
Lowest	20.0	Per cent
Highest	75.0	"
Average	59.1	"
Coagulation Time:		
Average time—3 minutes, 10 seconds.		
Sedimentation Time:		
Average time—54⅝ minutes.		

Kelly and Cullen reported that more than 50 per cent of their cases had never had children. Lynch, in his series, reported that 45 per cent had never borne children. It would seem that in this series with 57 per cent that had not borne full-term children and 18.8 per cent of one-child sterility, totaling 73.8 per cent of sterile patients, that there might be some relationship beween fibroids and sterility. Reynolds and Macomber, also Penrose, thinks the situation of fibroids in the uterus is the chief factor in producing sterility; as in the submucous fibroids producing improper drainage and congestion. The interstitial type creates pressure and interferes with the circulation of the uterus, causing congestion sufficient to alter the secretions and functions of the endometrium. He also states: "the multiplicity of fibroids has an increasing factor in the production of sterility."

OPERATION.

Surgical procedures have been employed in dealing with fibroids since the advent of antiseptic surgery, when Lawson Tate advocated the removal of the appendages as a curative method. Burnham of Lowell is credited with the first supra-vaginal amputation of the uterus for removal of fibroids in 1853.

In table No. 10, the operations were divided into supra-vaginal hysterectomy, which means the removal of the body of the uterus; pan-hysterectomy, including the body of the uterus and cervix; myomectomy, removal of the tumor from the body of the uterus; salpingo-oophorectomy, removal of the adenexa without reference to the uterus. This method was resorted to because of the nomenclature that was used by the different individual operators. 84.5 per cent had supra-vaginal hysterectomy, 10.5 per cent had pan-hysterectomy, 4.2 per cent myomectomy, .8 per cent exploratory labporotomy that the pathology was so extensive that the operation was postponed or that the patient succumbed on the table before the operation was completed. 79 per cent had bilateral salpingectomy, 16 per cent had unliteral salpingectomy, 5 per cent neither tube was removed. 52.5 per cent had bilateral oophhorectomy, 24.2 per cent had unilateral oophorectomy, 23.3 per cent neither ovary was removed. It will be noted that more conservation was used in ovarian tissue than in the other organs.

From my personal experience, surgery appeals to me because it permits the conservation of tissue when indicated and makes possible the removal of fibroids or other pathology. I do pan-hysterectomy where the cervix is badly diseased and accessible and the patient is in good condition. I do supra-vaginal hysterectomy in cases where the cervix is not diseased and is not accessible, but when it it is diseased I insist on taking out the cervix along with the uterus.

Much has been written in favor of removal of the cervix in all cases. Leonard found 3 per cent of cervical carcinoma associated with fibroids; Polak, 2 per cent; Davis, 6.5 per cent; Kostmayer found the mortality about the same from pan-hysterectomy as with supra-vaginal hysterectomy plus the carcinoma of the remaining cervix. While this evidence is convincing it is probable, nevertheless, that in the hands of the average and inexperienced operator, more patients would succumb as the results of increased scope of the op-

Table No. 8—Children and Miscarriages.

	Percentage
Number having full term pregnancies	43.0
Number not having full term pregnancies	57.0
Number never pregnant	35.9
Patients having miscarriages	31.7

No. Miscarriages	No. Patients
One	215
Two	59
Three	24
Four	8
Five	3
Six	2
Seven	1

eration than from the occurrence of carcinoma of the cervix. In this case it would seem better to leave the cervix for further treatment or possible carcinoma than to raise the primary mortality of pan-hysterectomy and at the same time the patient would have a few years of health and usefulness. Unfortunately the hypertrophied, lacerated and diseased cervix, which should come out, is the most difficult to remove.

Ovarian tissue is preserved, if possible, up to the menopause. Truesdale states: that, "only in the rare circumstances does hysterectomy necessitate the removal of the ovary." In our series it was 52.5 per cent that had bilateral oophorectomy.

Irradiation and myomectomy are possible only in occasional cases; the size, the multiplicity and the high percentage (95 per cent), of adenexal disease are contraindications for their use. Polak observed hypertension and a nervous phenomena were more pronounced after the use of radium than after operation. The objections to myomectomy are: the high prevalence of tube ovarian disease, that occasionally is more serious than hysterectomy, that it may be necessary to reoperate to remove the uterus for fibroids not detected at the first operation and pregnancy following myomectomy may abort, or labor may be complicated by a ruptured uterus. W. J. Mayo reported one death in 157 cases of consecutive myomectomies. Kelly and Cullen 5.4 per cent primary mortality in myomectomies. The cases most suited for myomectomy are: those in which the tumors are small and few in number, subperitoneal tumors and cases under 30 years old with no tubo ovarian disease. C. Jeff Miller stated that hysterectomies were necessary in 98 per cent of these colored cases.

While there is no reason to be conservative in a patient nearing menopause, we note that these patients begin menstruating early and menopause is started in the 30 to 40 year period. In this clinic, we see many cases where conservative surgery has been done and in a few months the same symptoms bring the patient back for the more radical type of procedure. On the other hand, we have the disagreeable and annoying symptoms of artificial menopause to combat, but fortunately the negress does not suffer as much as the whites. The social and economic condition of these patients demand that the plan of treatment be instituted that will insure a prompt and permanent cure.

ANESTHESIA.

General anesthesia, including ether, nitrous oxide, ethylene and a combination of all was used in 67.5 per cent of the cases. Spinal anesthesia in 32.5 per cent. The largest number of spinal cases was in 1930. Some services used spinal almost exclusively, while others did not use it at all. In the low anesthesia as is used in gynecological cases, the unpleasant symptoms are practically

Table No. 9—Fertility

Number of Children	Number of Patients	Youngest Child	Oldest Child	Average Age
1	188	3	37	18
2	122	2	36	15
3	46	5	20	14
4	31	2	21	10-1/2
5	14	5	6	5-3/10 plus
6	16			
7	5			
8	2			
9	3			
10	2			
11	1			

never seen. In our service, we use spinal exclusively; novocaine crystals dissolved in the spinal fluid and immediate Trendelenberg position has given us excellent results and our mortality has been nihil since this technic has been followed. Spinal anesthesia makes possible the free intake of fluids immediately, preventing post-operative complications such as, shock, a marked decrease in nausea and vomiting and a much less tendency towards gastric dilatation and adynamic ileus. It is of great advantage in cases of hypertension, diabetes, nephritis, excessive fat abdomens, pulmonary tuberculosis, influenza epidemics and in general poor surgical risks. There is less urinary retention, fewer post-operative wound infections and the stay days in the hospital are also less, and for the operator, the relaxation is complete and makes difficult operations easy.

PATHOLOGICAL REPORT.

For simplicity and convenience, I grouped pathological conditions under acute, subacute and chronic, fibroids and multiple fibroids. Multiple fibroids were found in 47.6 per cent and fibroids in 63.4 per cent. Acute salpingitis in 5.5 per cent; subacute in 12.9 per cent; chronic in 76.5 per cent; tubes reported negative, 2 per cent; pregnancy complication fibroids .8 per cent; dermoid cyst of the ovary, .7 per cent; adenocarcinoma .4 per cent. The pathological report of the endometrium and the ovaries was purposely left out owing to the length of their study.

The appendix was removed in 69.3 per cent of the cases. The operator seldom mentioned any gross pathology of the appendix, but simply stated that it was removed as a routine measure. To my surprise and teaching that appendicitis was very rare in the negro race, we find a very interesting pathological survey. Chronic appendicitis in 78.9 per cent, subacute in 18.8 per cent and .2 per cent were acute and only .28 per cent were reported negative. This pathological report would lead us to revise our opinion concerning appendicitis in the negro race. It is interesting to note the parallel comparison between the cases of chronic appendicitis and chronic salpingitis as well as the other condition in both the tubes and the appendix.

Table No. 10—Operations.

	Percentage
Super-vaginal hysterectomy	84.5
Pan hysterectomy	10.5
Myomectomy	4.2
Exploratory laporotomy	.8
Bilateral salpingectomy	71.0
Unilateral salpingectomy	15.0
Tubes not removed	5
Bilateral oophorectomy	52.5
Unilateral oophorectomy	24.2
Not removed	23.3
Appendectomy	69.3

MORTALITY.

The most gratifying results of this report was the low mortality rate which was only 2.7 per cent. This mortality rate rates with the lowest in the country and much lower than several of the other clinics. However, when we consider the extensive pathology and the poor surgical condition of these cases and I think it is exceedingly gratifying.

SUMMARY.

1. Fibroids in the negro race are approximately five times as frequent as in the white race.

2. Pain is the most common of symptoms.

Table No. 11—Pathological Report.

	Percentage
Multiple fibroids	47.6
Fibroids	53.4
Acute salpingitis	5.7 plus
Subacute salpingitis	13.4 plus
Chronic salpingitis	80.0 plus
Negative tubes	.2 plus
Pregnancy	.8
Dermoid cyst	.7
Adenocarcinoma	.4
Appendicitis:	
Acute	.72
Acute and chronic	1.3
Subacute	2.1
Subacute and chronic	16.7
Chronic	78.0
Negative	.28

3. The action of fibroids upon the cardiac system.

4. The high percentage of sterile patients with fibroids.

5. Pan hysterectomy when cervix is diseased and when it is accessible and not diseased.

6. Supra vaginal hysterectomy where the cervix is not diseased and is not accessible.

7. Myomectomy, radium and roentgen-ray have a limited field.

8. Ovarian tissue conserved whenever possible.

9. The high percentage of adenexal disease.

10. Spinal anesthesia, anesthetic of choice in experienced hands.

11. The high percentage of appendicitis in the negro race.

12. Low mortality rate in the negro race.

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DISCUSSION.

Dr. H. W. Kostmayer (New Orleans): Dr. Alsobrook's paper serves a useful purpose in that it shows us the end results of the surgery of fibroids. It makes it clear that surgery in this condition is relatively safe.

Another most interesting consideration is the relation of fibroids and sterility. His figures bear out my own theory of the relationship. Less than one per cent of these patients showed no changes in the tubes. Salpingitis of some sort was reported in nearly 95 per cent. I have always leaned to the theory that salpingitis is the etiologic factor in the sterility associated with fibroids, and that the fibroids occur because of the result of changes in the uterus which are in turn the result of the sterility. That is, I believe that the sterility causes the fibroids and not that the fibroids cause the sterility.

It would be most interesting if we could follow these colored women from the beginning of their illness, and particularly if we could follow those on whom myomectomy was done, but this is practically impossible. The negro woman is a gypsy, here today and gone tomorrow, but I still wish we could trace her, and that we could study the effect of her environment and her sexual life on the progress of her disease.

Dr. Hilliard E. Miller (New Orleans): A comparative survey such as this is always of value and it corresponds, I think, with the impressions of the surgeons who take care of the colored patients at Charity Hospital. It shows, as Dr. Kostmayer said, that the surgery of uterine fibroids is safe surgery, for it can be performed with a very low mortality rate even in women who exhibit the complications which these colored women do. It is very rare to find a colored woman with a fibroid and nothing else, very usual to find her exhibiting half a dozen other forms of pelvic pathology.

I should like to make it clear that the statement of Dr. C. Jeff Miller, quoted by Dr. Also-

brook, that he did 98 per cent of hysterectomies for fibroids, had reference only to fibroids in colored women. On our private services we do from 12 to 15 per cent of myomectomies, but conditions, as you know, are very different. Myomectomy is an operation that should be more frequently considered. In our hands it gives a curability of about 90 per cent, and subsequent pregnancies amount to at least 25 per cent of all such cases. Moreover, if the fibroids should recur, radium is always a possibility in women advancing in years, and a second operation is seldom necessary.

Radium is indicated in the interstitial type of growth, not larger than a four months' pregnancy, in which tubal disease can be definitely eliminated. It avoids a surgical procedure, which is always attended with a minimum of risk, and in the cases we have followed the results have been almost uniformly good.

I do not know of any gynecologic problem which is more satisfactorily standardized than the problem of uterine fibroids. In young women with small growths, myomectomy is the ideal procedure when the indications can be met. In patients over 38 to 40, with interstitial growths of the proper size, radium gives excellent results. In other cases, surgery is indicated and can be done with a very small risk, as this paper shows.

One point in the technique of supra-vaginal hysterectomy might be mentioned. It is well to be sure that we do not perform the operation too low. Curtis has shown that the cavity of the uterus remains sterile in the face of unbelievable pathology elsewhere in the pelvis, and for this reason operation should always be done well above the internal os. The mortality rate is lower and the morbidity lessened when this precaution is followed. The experienced surgeon should not hesitate to perform the complete operation when it is indicated, for the risk is practically no greater.

Dr. W. D. Phillips (New Orleans): Having worked in the wards of Charity Hospital for a number of years, I well appreciate the very complete statistics as given by Dr. Alsobrook, and whereas I agree that what he has said regarding work at Charity Hospital may be true, I do not feel that it represents the true status of our private patients. I was somewhat surprised at the small percentage of myomectomies in his series of cases. I am sure you would find a larger percentage in a survey of private cases. Unfortunately, at Charity Hospital, one rarely sees the small fibroids. These patients do not seek advice until the tumors have grown to a large size, or maybe complicated with extensive pelvic disease. I know of no type of patients that present such problems as do the colored gynecological cases at Charity Hospital. They differ in many ways from our private patients.

Eight or ten years ago I read a paper on the subject of uterine fibroids before the Louisiana State Medical Society, and while I sat here this afternoon and listened to this paper, I was impressed with the fact of how little the treatment of fibroids has changed. Then, as now, we could group our fibroid cases, particularly with reference to the size and type of growth.

In my opinion the small uncomplicated fibroids in young women, still in the child-bearing period, demand myomectomy wherever it can be done. The small fibroids in older women, smaller than a three or four months pregnant uterus (if not predunculated) may usually be treated with radium, provided, of course, that the patient has passed the child-bearing period. The larger tumors, in elderly women, associated with or without pelvic disease, demand surgery. Supra-vaginal hysterectomy or incomplete hysterectomy is preferable when the cervix is not diseased, for in the hands of the average surgeon, it carries with it a lower mortality rate than the complete hysterectomy. Preliminary cauterization of the cervix is of value and I feel that it not only reduces mortality but morbidity as well. It is done routinely in my service and I would like to ask Dr. Alsobrook if he advocates it as a preliminary procedure to hysterectomy.

Dr. Joseph Cohen (New Orleans): At the meeting of the Southern Medical Association in Miami, it was my good fortune to read a paper reporting one thousand cases of uterine fibroids collected from the records of Charity Hospital. These were consecutive cases, running back from July, 1929. My percentages do not entirely correspond with Dr. Alsobrook's. The white patients furnished 10.3 per cent of the total, the colored patients 89.7 per cent. That is, the ratio was 1 to 9.

I was especially interested in the problem of sterility and fertility. Of the 1,000 patients 371 were sterile, 46.1 per cent, and 35 per cent of these were never pregnant at all, the remainder having conceived but having had no living child. I began to theorize, and I quote from my paper:

"Why did these women either have no children or have only one child? Is the fibroid responsible for their sterility or para one lives? If so, how is it responsible? By mechanical interfer-

ence? Yes, in some instances, either by pressure on the adnexa, interfering thereby with function, or by obliterating either the uterine cavity or the cervical canal. Does the fibroid gives off a secretion or hormone that is responsible? Perhaps! And yet, how about the patients with fibroids who have several children? It may be that the fibroid has active periods and quiet ones, and that during these active periods some inactivating substance is produced which inactivates the reproductive cycle of the patient, keeping her sterile, and that during the passive periods when the inactivating substance is not produced, the reproductive cycle becomes active again and the patient becomes pregnant."

I was interested in the Wassermann reaction. Positive Wassermanns, varying from plus 1 to plus 4 were found in 20.4 per cent of these patients, showing that they can still have syphilis and fibroids and bear children. The mortality rate in my series was 4.6 per cent in the cases submitted to surgery; all of them were not operated on. On some services operation is done with the Wassermann still positive, on others the patient is referred for anti-luetic treatment before surgery is undertaken, and I was interested to see what effect this variation in treatment would have on the mortality rate. It had none at all. The patients with positive Wassermanns at the time of operation fared no worse, either from the standpoint of morbidity or the standpoint of mortality, than did those whose syphilis was treated prior to operation.

Dr. E. L. King (New Orleans): I rise to dissent from Dr. Alsobrook in the matter of the dangers of uterine rupture if pregnancy occurs after myomectomy. I should like to know whether he has any figures to prove his point. The experience we have had does not bear out his statement, and for my own part, the possibility of future pregnancy would certainly not deter me from doing a myomectomy, but would serve rather as an indication, for a patient who is properly supervised runs practically no risk of this catastrophe.

Dr. H. B. Alsobrook (closing): We do not use preliminary cauterization before pan-hysterectomy, as Dr. Phillips suggests, but we do have a special preparation. On the morning of operation, after a cleansing vaginal douche of potassium permanganante, the patient either voids or is catheterized; then the vagina is filled by syringe with a solution of iodine and alcohol in equal quantities until the fluid overflows from the vuva. A starch pad is then applied, and in our opinion this technique lessens both our morbidity and our mortality.

In reply to Dr. King, I have no figures for the percentage of uterine rupture after myomectomy, and I would remind Dr. Cohen that my percentages differ from his chiefly because my figures concern only fibroids in the colored race.

RADIUM IN THE TREATMENT OF CERTAIN DISEASES OF THE UTERUS.*

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JACKSON, MISS.

In a consideration of uterine diseases in which radium is applicable I shall limit myself to four—carcinoma, uterine fibrosis, idiopathic hemorrhage and endocervicitis. Since I first began the use of radium, nearly ten years ago, the conditions enumerated have been practically eliminated from the field of surgery insofar as I am concerned. I have found that better results can be obtained with radium without the dangers attendant on operation and prolonged stay in the hospital which usually follows a resort to surgery in these cases.

In my judgment there has been no greater advance in the treatment of any single disease than has been made by the use of radium in carcinoma of the cervix uteri, even where the disease has progressed beyond the incipient stage. Cases that were formerly thought to be hopeless are being cured with great frequency by the application of this method, and, in the incipient stage of the disease, I feel that recovery should amount to practically 100 per cent.

There is still some difference in the mode of application of radium, some operators preferring to use smaller doses successively repeated, but I think that the trend today is to use a massive dose at the first application. It is a well-known fact that tissues become radio-resistant and that the

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same result cannot be obtained by a second application as with its initial employment.

Radium acts on tissues in several ways, principally by destruction of embryonic cells without great damage to the fixed tissue cells and by obliterating the smaller blood vessels with the resulting formation of cicatricial tissue. It has been estimated that the gamma rays of radium are destructive to embryonic tissue for a distance of at least four inches if left *in situ* for a sufficient length of time, care being taken to exclude by screening the *alpha* and *beta* rays which are destructive of nearby tissues.

In cases of carcinoma, we needle the cervix or its remains, using not less than 50 mgs. in this manner and using 50 mgs. in capsule in the uterine cavity for a minimum dosage in moderately advanced cases of not less than 5000 mg. hrs. These patients are instructed to report for examination at the expiration of five or six weeks and are kept under observation at intervals of two or three months for a period of at least three years.

To one who has not before seen the extent to which a carcinomatous cervix will clear up after the use of radium, the result appears almost miraculous. Cases in which the cervix has been practically entirely destroyed and in which the vaginal vault seems to be nothing more than a disintegrating crater will have become perfectly smooth and healthy in appearance and covered over by apparently normal mucous membrane at the expiration of from six weeks to two months. Offensive discharge and bleeding have stopped and the patients uniformly have gained materially in weight and strength. Of course, there is present the discharge which always follows the application of radium.

Used in the dosage mentioned above, we have not found it necessary to make a reapplication in one per cent of our cases. Of course, in advanced cases where there is metastasis into distant organs, nothing can be hoped for in the way of permanent cure from this or any other method, but in this type of case we can at least do something for the comfort of the patient by relieving pain and stopping hemorrhage and foul smelling discharges.

In the treatment of uterine fibrosis, the application of radium should be limited to uteri of comparatively moderate size. The large fibroid which has risen out of the pelvic cavity, particularly of the nodular type, is best treated by hysterectomy, though in some cases in which surgery was contra-indicated we have been astonished at the rapid shrinkage in the size of the tumor and the complete cessation of all symptoms. I recall one case in particular of a tuberculous patient suffering from severe hemorrhage and who it was not thought expedient to operate upon, on whom we used 5000 mg. hrs. of radium for the relief of the hemorrhage alone, not expecting any great reduction in the size of the tumor. This growth reached to the level of the umbilicus. Four months after the administration of radium I saw this patient again and was astounded to find that the uterus had been reduced in size to less than that of the normal organ. The tumor, however, was a leiomyoma and not a true fibroid, nor do I think had it been the latter that such a result would have been possible.

Smaller growth are usually given a dose of from 2500 to 3500 mg. hrs. of 100 mgs. in two or three capsules which generally suffices to stop all hemorrhage and reduce materially in size the fibromatous uterus of moderate size.

In dealing with what, from want of a better name, Dr. Howard Kelly denominates "idiopathic hemorrhage," usually found in young girls, one has to be very careful with the amount of radium used. This condition seems to have no demonstrable pathology but for some unaccountable reason, these patients have hemor-

rhages ranging from a moderately severe flow to others which are so severe as to threaten life. Here it is not desired to bring about a complete cessation of the menstrual flow and the use of a large amount of radium would interfere with the proper functioning of the ovaries and result in sterility, therefore, it is better to feel one's way along, giving too little rather than too much radium and repeating its application should the desired result be not obtained. I would suggest that an initial dose be employed of not over 500 mg. hrs., the subsequent amount to be used to be determined by the result obtained. The judicious application of radium in this manner will nearly always regulate the menstrual function so that the menorrhagia will be controlled without serious interference with the child-bearing function.

Endocervicitis with its resulant leucorrhoea, often extremely annoying to the patient, has been subjected to many different forms of treatment with varying measures of success. The leucorrhoeal discharge comes from the ovules or glands of Naboth which are situated rather deeply in the uterine wall about two-thirds the way up the cervical canal from the external os. From the situation of these glandular structures one can readily see that the treatment by means of cervical applications, douches, etc., is practically futile and that only such measures as will destroy these glands promise success. The surgical removal is a rather difficult technical procedure and their destruction by cautery, either actual or electric, is uncertain. The insertion of radium needles sufficiently long, either ten or twelve and one-half mgs. directly into the cervix, permitting them to remain for a period of six hours, practically always results in the obliteration of these glands with a cessation of discharge. In using the needles inserted directly into the tissue without screening, we do not entirely exclude the *alpha* and *beta* rays but as destruction of tissue is desirable here, any further screening than that supplied by the needles themselves is unnecessary.

I have avoided as far as possible any technicalities with reference to radium or any prolonged description of the effects of radiation on tissues. I desired merely to present some practical points for your consideration in ailments which are so commonly encountered in general practice.

DISCUSSION.

Dr. E. C. Parker (Gulfport): Make an early diagnosis. The earlier you get the radium, the better the result. Do not take the patient's word for anything. Insist on an early examination, and get in an early treatment.

Uterine prolapse was not mentioned by Dr. Barksdale. Women past thirty years of age who have old lacerations should be examined frequently to get them at the beginning.

Dr. M. D. Ratcliff (McComb): I have treated with irradiation, several causes of fibroids of uterus, and I am just wondering if it was not the too rapid action of rays on large tumors that caused them to break down and serve as a focus of infection which caused some of these patients to suffer attacks of multiple neuritis. Radium in cervical applicator well screened and placed in the cervical canal and giving about four hundred milligram hours in simple endocervicitis will produce excellent results in many cases.

Dr. Wm. F. Hand (Jackson): It is appalling when we stop to think that we have approximately one death in every eight caused from cancer. A great number of these deaths are due to malignancies of the uterus. The most important factors that influence prognosis and end results in uterine cancer are early diagnosis, histological characteristics of the tumor, and the choice of treatment. Early diagnosis, to my mind, is of the utmost importance. Cancer must be diagnosed early and treated promptly in order to obtain the results we so desire. Dr. Healy, of the Memorial Hospital, New York City, divides his cases according to the classification of Broders, that is, into four groups, the first group being least malignant and most radio-resistant, while group four is the most malignant and most radio-sensitive. Bearing out the statement of the essayist in regard to the fact that surgery is not the best proceedure, especially in the cases of even the moderately advanced malignancies of the uterus, I bring to your attention facts as brought out by Dr. Healy in reporting a large number of cases. He says that under surgi-

cal treatment nine and one-half per cent of the cases remained well for five years, whereas under radiation therapy 66 per cent remained well for five years. The same results have been found at the Mayo Clinic. Under surgical treatment the grade four cases gave uniformly bad results, as reported by Mahle. On the other hand, under radiation therapy 50 per cent of their cases remained well at the end of five years. This was an extremely interesting and timely presentation and should impress upon our minds the necessity of an early diagnosis and of prompt treatment."

UTERO-SALPINGORRHOPHY WITH LIPIODOL.*

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JACKSON, MISS.

In speaking on this subject, no attempt will be made to bring to you anything of a novel nature or to augment the literature of a subject, already rather voluminous, but rather will there be entertained the hope that attention may be redirected to a procedure, of considerable diagnostic value, no little therapeutic efficiency and rather simple of execution.

There is no reason to believe that sterility is any greater today than it was in the past, yet we have learned that the woman is not entirely to blame for childless marriages, but that the fault lies with man in at least twenty-five per cent of the cases.

While sterility *per se* is not a menace to life, it does play a most important role in marital infelicity.

There are two great divisions of sterility in the female:

A.—Absolute;

Pregnancy is impossible because of genital defects.

B.—Relative:

1—Congenital:

Though some cases are amenable to treatment, as a general proposition very little can be done for these cases.

2—Functional:

These cases may be greatly helped by:

1—Correcting physiological derangements and regulation thereof.

2—Dietetic regime.

3—Control of psychic factors.

3—Acquired:

Of this form infection of the fallopian tubes is the most common.

In the normal fallopian tube there is a peristaltic wave, beginning at the fimbriated extremity and passing mesially every fifteen seconds, and when this wave is hindered, it is because of pathology in the fimbriated extremity of the tube in 75 per cent of the cases. Therefore, for our study we shall confine our remarks to the fallopian tubes for the greater part.

There are two recognized methods for determining the patency of the fallopian tubes—namely the method of Rubin and the injection of an opaque medium into the uterus and then into tubes and out into the peritoneal cavity—if the tubes are patent.

The Rubin test is, briefly, the passing of some inert gas, such as CO_2 through cannula inserted into the uterine cavity, the gas passing up through the uterus, and out of the tubes into the peritoneal cavity, if the tubes are patent. A stethoscope placed over the lower abdomen will enable the examiner to distinguish a characteristic whistling sound, as the gas passes from the narrow lumen of the tube out into the comparatively wide space of the peritoneal cavity.

This sound is positive evidence of the patency of the fallopian tube, but does not locate the site of the stricture, if one ex-

*Read before the Section on Radiology at the Sixty-fourth Annual Session of the Mississippi State Medical Association, Jackson, May 13, 1931.

ists, is attended by considerable pain throughout the abdomen as it becomes distended with the gas, and some times it is necessary to run the pressure as high as 300 mm. of mercury to force the air through.

Of the opaque methods used, we have confined our efforts to the use of lipiodol, which is a 40 per cent emulsion of iodine in poppy oil.

This method is very simple; cleansing the cervix of the uterus in the usual surgical manner, inserting the neck of the cannula into the cervix, and with a pressure of 40 to 100 mm. of mercury (dependent upon the resistance encountered) the lipiodol to the amount of five c.c. is slowly driven home; and then without moving the patient a roentgenogram is taken of the pelvic area; and it is best to retake the roentgenogram at the end of twenty-four hours to determine how much of the solution has passed into the peritoneal cavity and whether the uterus has emptied itself by gravity.

No serious accidents have occurred from the employment of this procedure, though Witner has reported the rupture of a fallopian tube. However, no ill effects followed this accident.

Occlusion of the fallopian tube may occur any where along its course, but the most frequent site is the isthmian portion, and as with all inflammatory processes, the restoration of the lumen of the tube is dependent upon the absorption of the inflammatory products, and the fact that the fimbriated extremity is not adherent to the ovary and is at least partially open.

There are certain contraindications to its use:

1. Recent hemorrhage.
2. Inflammatory processes that are not completely quiescent.
3. Active inflammation or malignancy involving the cervix.
4. Previous intrauterine interventions.
5. Ectopic or intrauterine gestation, in which a therapeutic abortion is not desired.
6. Infected cervical or uterine polyps.

There are distinct advantages to its use:

1. Is harmless and is opaque to roentgen-rays.
2. Locates site of stricture.
3. Shows deformities, such as uterus bicornis, etc.
4. Shows fibroids encroaching upon the lumen of the uterus, giving a filling defect.
5. The slow liberation of the iodine from the lipiodol is of therapeutic effect, as subsequent pictures show definite improvement.
6. Certain percentage of these cases subsequently become pregnant, and sometimes so soon after the treatment, that injections and pregnancy seem to bear a casual relationship.
7. The lipiodol is absorbed from and disappears from the peritoneal cavity within seven to ten days and from the uterus by gravitation in one to two days. However, if the fimbriated extremities of the tubes are sealed, the lipiodol may remain for several months, even becoming inspissated.
8. There are some immediate results possible:
   a. Mucus plug may be dislodged from the cervical canal, by the mere introducing of the cannula.
   b. Mild agglutinations of the folds of the tubal mucosa may be separated.
   c. Tortuous tubes may be straightened, especially of the infantile type.
   d. Inspissated mucus may be dislodged from a narrow to a wid-

part of the tube, and thus open the way for the descending ovum and ascending spermatozoon to meet.

CASE REPORTS.

Case No. 1. White; aged 36 years; married eight years; never pregnant; no distinct venereal history, though husband is the kind of man who philanders. Notice that the tubes are narrowed at the isthmus and along the entire tract, till the fimbriated ends are reached, and that no lipiodol enters the peritoneal cavity. Obviously the tubes the sealed and pregnancy is impossible under such conditions. Three months later was operated upon and bilateral pus tubes removed; thick yellowish pus, with some inspissated lipiodol in the tubes.

Case No. 2. White; aged 33 years; married six years; never any pregnancy; no history of genital infection; but husband gives history of left epididymitis nine years ago. The left tube is elongated, but the lipiodol emerging from the fimbriated extremity, while on opposite side the tube is curled upward and backward onto the uterus, but is patent. So far as this woman is concerned she could become pregnant, yet with a husband giving such a history as is his, the chances of her becoming pregnant are rather slim.

Case No. 3. White; aged 26 years; married seven years; never pregnant. No history of infection on part of either mate of this union; yet the right tube is snarled and curved up on itself and adherent to the uterus, while the left tube is freely open as shown by the amount of lipiodol that has trickled through the tube and out into peritoneal cavity.

Case No. 4. White; aged 38 years; married 16 years; never pregnant. Husband has had gonorrhea and intracellular Gram—negative organisms have been obtained from vaginal smears of this woman. Slide shows that some of the lipiodol does percolate through the right tube, but left tube is snarled and adherent to back of uterus, with very little of the lipiodol escaping from the tube. Three months after injecting this woman's genital tract this woman became pregnant, bore a still child, and has subsequently borne a live child.

Case No. 5. White; aged 34 years; married 10 years; never pregnant. No history or suspicion of genital infection. Slide shows the elongated right tube, lumen patent and lipiodol has trickled through the fimbriater extremity, and area is adherent to the ovary's surface, and the left tube is elongated and somewhat constricted. With such a picture the probabilities of pregnancy are indeed slim.

Case No. 6. White; aged 32 years; married 12 years; never pregnant; operated upon and was told that the right tube and ovary were removed along with the appendix; menstruates regularly. It is very apparent why this woman has not become pregnant, and also shows how essential records are to the operating surgeon; for you can readily see that both tubes have been removed, whereas the surgeon's memory was to the effect that only one tube had been removed.

Case No. 7. This case is the same as No. 4, but taken three years later. The examination was to determine whether the tubes remained patent. Instead of passing five c.c. of lipiodol into the uterus, 20 c.c. were used, and from the way the opaque substance is smeared along the lumbar folds, you can see that tubes did remain patent. This woman has borne a healthy baby since then.

Case No. 8. This woman was supposed to be a full term pregnancy, there being some doubt as to whether it was intrauterine or extrauterine; the uterus was injected with lipiodol; instead of showing up the usual picture, you will see that there is a large mass here that was correctly diagnosed by Dr. Van Ness as being an intrauterine tumor, while there is a mass to the outer side of the uterus, in which you can see two teeth. Operation proved that the extrauterine mass was a dermoid tumor, while in the uterus was a mass diagnosed as placenta, but no foetus was found. Hysterectomy and oöphorectomy was done, and woman has remained well.

This method of injecting the fallopian tubes is of great value in that it shows:

1. Development anomalies.
2. Tubal conditions or processes leading to sterility.
3. Straightening out of the kinks in the tubes, and rendering subsequent pregnancy probable.
4. Condition of tumors as to whether they are intra or extrauterine.

DISCUSSION.

Dr. E. B. Van Ness (Jackson, Miss.): There is just one thing that I would like to emphasize, and that is the careful ruling out of pregnancy before the injection of lipiodol. I remember one patient referred for lipiodol injection to determine the cause of sterility. After injection, we were able to make a diagnosis of pregnancy. Abortion followed, but she later had a baby.

A NEW ANASTOMOSIS BUTTON FOR GASTRO-INTESTINAL SURGERY.

JAMES THOMAS NIX, M. D.,*

NEW ORLEANS.

Anastomoses of the gastro-intestinal tract, making use of the Murphy button, when done by those surgeons skilled in the technic, admittedly give a low mortality. On the other hand, as W. J. Mayo says: "'Nearly 20 per cent of buttons are imperfect and dangerous.' Every button should be tested before it is used."†

For this and other reasons, only a small number of good surgeons make use of this most valuable instrument.

Other buttons and mechanical devices have been suggested, as the decalcified bone bobbin of Robson and Allingham, the suggested aluminum ring of Gould, the Lap'ace forceps for lateral anastomosis, and the principle of the elastic ligature as pictured by McGraw. Each has had its advocates, but after years of trial and weeding out, only the Murphy button holds any appreciable place. Few surgeons at this time understand its use, and, in the writer's opinion, still fewer give it the established place it should command.

Bearing these facts in mind and at the same time estimating as invaluable the worth of the Murphy and other buttons, a series of experiments in intestinal anastomoses have been carried on.

One of our prominent local surgeons remarked a few days ago that he seldom uses the Murphy button because, during his service as House Surgeon of the Charity Hospital, observing the work of many skilled operators, "he followed too many patients to the dead house." On the other hand, Dr. Rudolph Matas invariably uses a small round button, dropping one-ha'f in each segment of the jejunum when doing a gastro-enterostomy.

*From the Department of Surgery, Louisiana State University Medical Center, and the J. T. Nix Clinic, New Orleans.

†DaCosta, Modern Surgery, Ninth Edition, p. 1080.)

DESCRIPTION OF THE BUTTON.

The button herein described is humbly submitted to the profession in this preliminary report. There are still improvements to be made and it is not offered as final in its present form. However, it appears to be simple in its construction, sound in principle, durable, safe, easy to apply, and adjustable to meet various types of anastomoses.

The detachable stylus for aseptically threading the bowel on the button without sutures, the compression feature afforded by rubber gaskets of different elasticity, the simple locking device with right angled ratchet thread which does not fail, and the simplicity of construction and rep'acement are especially to be stressed.

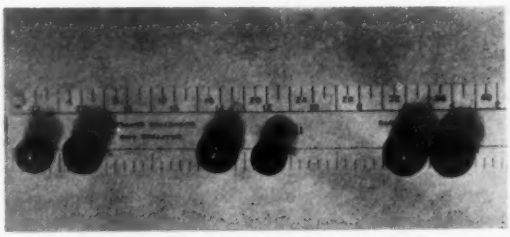


Figure A. Buttons 1, 2, and 3, made up of black sponge rubber on the male unit, and faced with a metal washer. The female unit is composed of hard red rubber with a cylindrical opening bored through. The bowel is fixed on the female unit with small sharp pins one-eighth of an inch in length. Button Number 3 carries a thread on the shaft of the male unit and a U wire running through the female unit around the cylindrical opening.

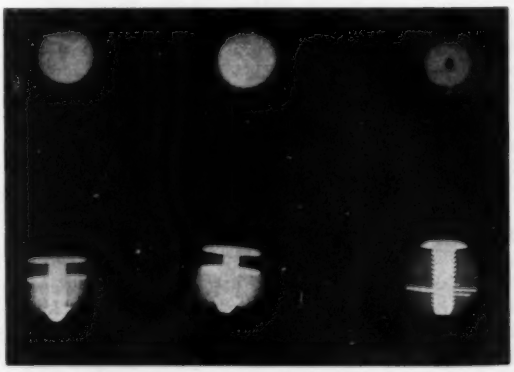


Figure B. Antero-posterior and lateral roentgenograms of the buttons described in Figure A.

Figure A shows a photograph of a few of the buttons tried in our experiments. Figure B shows roentgenograms of the anterior - posterior and lateral views of Figure A.

The first two show rubber gaskets of different densities with a metal washer between, which covers the softer sponge rubber on the male unit. The tip of the plunger of the male unit is arrow-shaped and is forced through a cylindrical opening in the hard rubber of the female unit. This type, being difficult to operate, was found unsatisfactory and was promptly discarded.

Button number 3 shows a screw thread in the metal of the male unit and a U wire passing through the female unit around the cylindrical opening. The U wire locked well, but had a tendency to slip and did not give sufficient compression. This was used in one experiment for lateral anastomosis of the colon of a rabbit. The button was not passed and after twenty-one days was removed. The anastomosis was complete and with slight finger pressure the button was forced through the stoma. It probably would have passed naturally in a few days.

Button number 4 employed the principles of an outer and an inner sleeve. Spring brass was used. The thread of the inner sleeve was screw type except that it was not the customary inverted V thread, but the long slope of each thread formed the hypotenuse, and the descending limb, the upright side of a right angle triangle. Technically, this part of the male unit is called the threaded-flanged nipple. Correspondingly, in the end of the outer sleeve, a hook dipped down at right angles to lock in the thread of the male unit. The female sleeve was slit longitudinally in seven or more equal parts so as to give it a spring effect and permit easy insertion of the male into the female sleeve. Technically, this part of the female unit is called the split-spring-flanged nipple. On the male side, hard red rubber was used and soft sponge rubber on the female side. A metal washer covered and protected the face of the sponge rubber gasket of the female unit. The rubber gaskets used for all experiments were cut from large pieces of sheet rubber and, although entirely satisfactory, the cut sides can be cured and the gasket made more uniform and durable at nominal cost when ordered according to pattern and scale from the Goodrich or some other rubber company.

Button number 5 is the same in principle as button number 4, with the self-threading, non-suture device added as a stylus to fit in and close the locking end of each half of the button. On the female side, the stylus is threaded and snaps in as the male cylinder would. It is unscrewed after the bowel is threaded on the button. On the male side, the stylus has a slightly conical surface ground to fit snugly into the male end of the button. A hip on the stylus carries the bowel or stomach over on the screw threads. The stylus is then turned back and easily removed from the button. The two units of the button can now be readily snapped together as tightly as desired. Interrupted Lembert sutures may or may not be placed around the button for additional security. This was not found necessary in lateral anastomoses of our animal experiments.

Figures 1 and 2 show the dissembled button. Figure 3 shows the halves of the button assembled, with the stylus detached. Figure 4 shows the completely assembled male and female units. Figure 5 shows the snapped buttons as they appear after

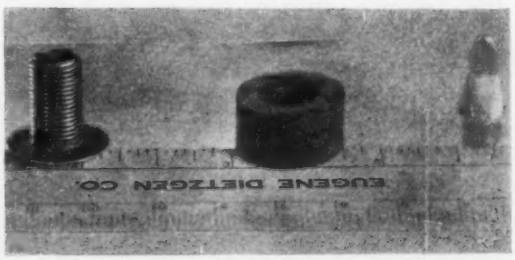


Figure 1. Male unit dissembled, showing threaded metal sleeve, hard red rubber gasket, and stylus point.

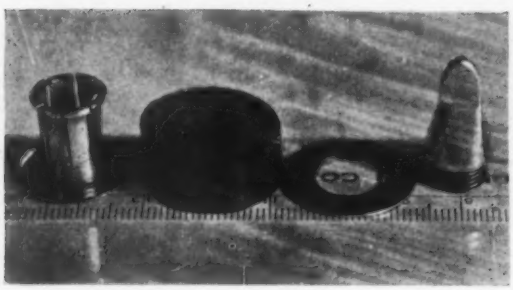


Figure 2. Female unit dissembled, showing metal sleeve with right-angled hook on end, longitudinal slits extending nearly the full length of the sleeve, black sponge rubber gasket, metal washer to face sponge rubber and threaded stylus point.

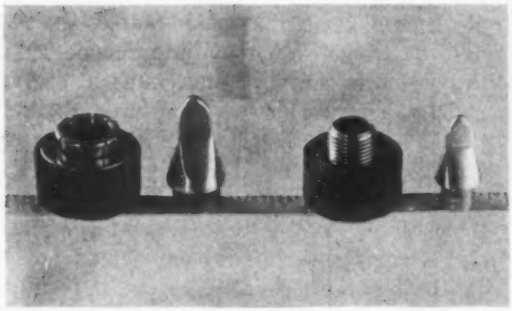


Figure 3. Button Number 5. Assembled female and male units with stylus points detached.

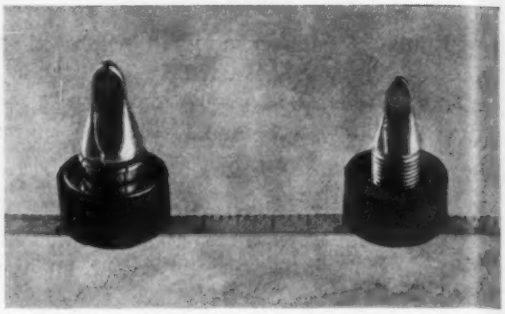


Figure 4. Button Number 5. Completely assembled female and male units.

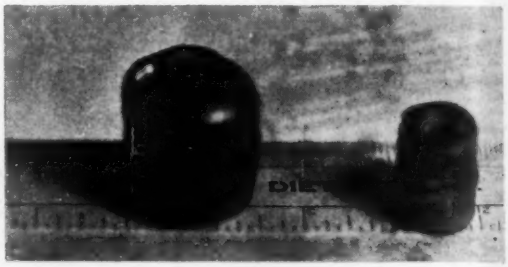


Figure 5. Large and small buttons that have been successfully passed, the larger one used for the gastro-enterostomy in the patient described in this article, and the smaller noe for an entero-enterostomy, in a rabbit.

The smaller button, described as Button Number 4, is the same in principle as the larger one with the exception that no styli were used with this button in making the anastomosis. The styli were developed because of the difficulties usually encountered in suturing the bowel around the button.

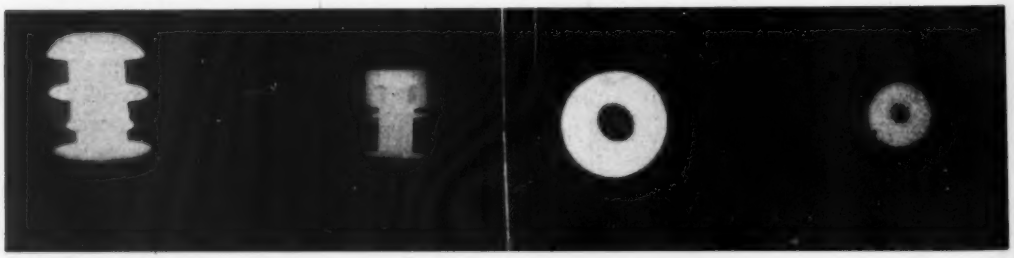


Figure 6. Roentgenograms showing antero-posterior and lateral views of buttons in Figure 5.

having been passed; the larger one in the human, and the smaller one in a rabbit. The sponge rubber gasket is slightly swollen, otherwise there is no visible nor detectable change in the physical appearance or character of the rubber. Figure 6 is a roentgenogram showing antero-posterior and later views of the button in Figure 5.

EXPERIMENTAL.

Many experiments were conducted on rabbits and dogs, on all of which accurate reports, photographs and radiographs have been kept. The number 5 button was released in every instance, making a strong and adequate anastomosis, and expelled in all but one case, a gastro-enterostomy. In one dog, after an entero-enterostomy, it was passed in four days; in a rabbit, after a colostomy, the button was passed in twenty-four days, representing the shortest and longest intervals that the button remained in the intestinal canal. In the case herein reported, the button was released in

six days, completing a satisfactory gastro-enterostomy, but it was over-sized and could not pass through the intestines of the dog and dropped back into the stomach. This was demonstrated by roentgen-ray studies of the button in the stomach showing varying positions. On subsequent removal by gastrotomy there was noted the almost negligible action of the stomach juices on the soft rubber gasket. In all probability, the button could have been sent through the intestines by purgation had it been desired.

Experiment Number IV. May 18, 1931: Dog, female, weight 8.9 kilograms. Anesthetic, ether. Operation, gastro-enterostomy, using button Number 5.

May 19, 1931: First post-operative day, dog droopy and weak.

May 20, 1931: Second post-operative day, no apparent discomfort.

Roentgen-ray pictures taken on May 24 and 27, 1931, show the button in the same place. The dog is apparently comfortable and happy.

May 30, 1931: Twelfth post-operative day, roentgen-ray shows the button released and in the stomach. This was a large button and had to be forced into the small bowel during the operation. The button was permitted to remain in the stomach until June 1, 1931, when it was removed by gastrotomy. The integrity of the button was unchanged. It might still have passed, but the diameter of the button used was much larger than the diameter of the lumen of the small bowel.

Figures 7 and 8 show the button in different positions in the stomach. Figure 9 shows a healthy dog on the thirtieth post-operative day. The dog is still alive and frisky, July 2, 1931.

Round Murphy buttons occasionally drop back into the stomach following gastro-enterostomies. In one of Dr. Murphy's cases, the button was not passed until the eighty-fifth post-operative day. This objection was overcome in the oblong Murphy button and is well protected against by using a larger sized oval gasket on the intestinal side of button Number 5.

The large number of pictures necessary to properly present this article does not permit of further animal illustrations.

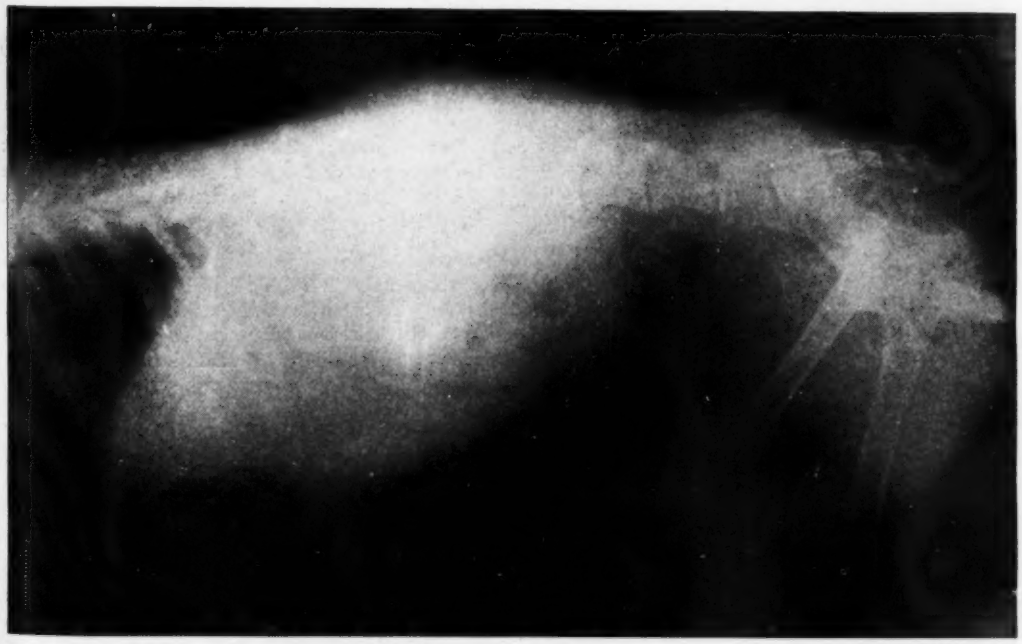


Figure 7. Case Number IV. Roentgenogram taken on May 24, 1931, sixth post operative day. Button still in stomach.

Figure 8. Case Number IV. Roentgenogram taken on May 27, 1931, ninth post operative day. The picture shows the button in a different position in the stomach compared to Figure 7. It evidently has been released and is free in the stomach.

Figure 9. Case Number IV. Picture taken on June 18, 1931, thirtieth post operative day. The dog made an uneventful and rapid recovery, showing no ill effects from the operation. He is still alive and happy.

OPERATIVE REPORT.

The button has been used successfully in the human in two cases, the first one being herewith reported:

Identity: Mr. A. H., white, male, aged 55 years, weight 176 pounds.

Family History: Unimportant.

Past History: Patient has been in excellent health except for frequent soreness of the stomach and mild indigestion. He would often take soda for relief.

Present Illness: In May, 1931, the patient was taken acutely ill at his home in Southern Louisiana with extensive hematemesis. This recurred after six hours and he was sent in an ambulance to Hotel Dieu, New Orleans, sixty miles away. His condition was critical on admittance. Pulse was feeble, thready; volume poor; rate 140; blood pressure, 80 systolic, 65 diastolic. Blood of donors was matched with his for transfusion and 500 c.c. of whole blood were given by direct transfusion, using the Jube apparatus. Steady and rapid improvement followed with no hemorrhages.

Operation: June 2, 1931, gastro-enterostomy, using button Number 5. A long median incision from the ensiform to the umbilicus was made. Exploration revealed a hard circumscribed ulcer

about three-fourths inch across in the second portion of the duodenum near the pancreas. The surrounding bowel was healthy. There were no mesenteric glands palpable and the peritoneum of viscera and abdominal wall was apparently normal. The ulcer was quiescent and because of its location was not disturbed. A short linear incision, one-half inch in length, was made on the anterior wall of the stomach, and the complete male unit with the stylus dropped in. The jejunum was now brought up under the transverse mesocolon and similarly treated, dropping the female unit in its lumen. Through the usual opening in the tranverse mesocolon, the posterior wall of the stomach was delivered in the larger abdominal cavity and the halves of the button in the stomach and jejunum snapped together very easily.

Progress Notes: Convalescence has been most rapid and uneventful. There was little or no operative distress. Hypodermoclysis of normal saline solution, 500 c.c., was given every six hours for three days, with one dram of water every half hour orally. Nutritive enemas of coffee, three ounces; whiskey, two ounces; saline solution, five ounces, every six hours. After the third post-operative day, sodium phosphate, one-half dram in six drams of water, was given every morning.

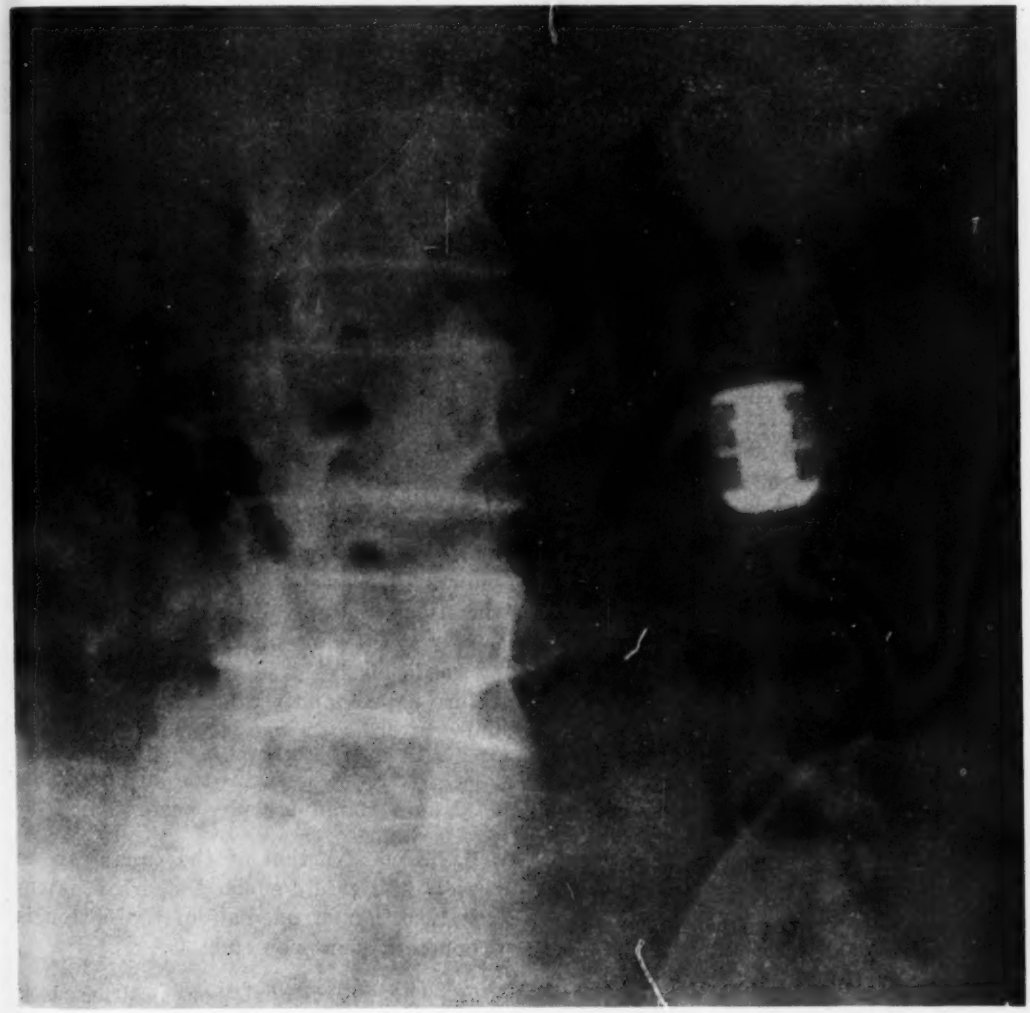


Figure 10. Mr. A. H., operation June 2, 1931. Roentgenogram taken June 6, 1931, showing lateral view of button. In this instance lower metal cap of the female unit was made heavier to insure the button's dropping into the small bowel. Notice the short distance of the metal washer from lower end of button compared to the much greater distance of metal washer from the upper end of the button. This represents the compression of sponge rubber secured in snapping the button, the sponge rubber gasket being below the metal washer, and the hard rubber gasket being above.

Figure 11. Mr. A. H., June 10, 1931, eighth post operative day. The patient is very comfortable. There is no distress whatever.
The button passed on the twenty-second post operative day, June 24, 1931. The patient is feeling as well as ever before. He is still in the country and a final picture will be taken when he returns.

June 7, 1931: Fifth post-operative day, surgical liquids, three ounces every two hours; nutritive enemas discontinued.

June 9, 1931: Seventh post-operative day, full liquids, four ounces every two hours.

A roentgenogram was made on the seventh post-operative day. The patient was very comfortable. There was no untoward symptoms.

Bowels moved daily after the fifth post-operative day; no blood in stools, no discomfort.

June 14, 1931: Twelfth post-operative day, patient given semi-solids, as in ulcer diet, combined with alkaline powder after meals.

June 21, 1931: Nineteenth post-operative day, patient was discharged from the hospital with instructions as to observing stools for the button and symptoms which might accompany its transit through the bowel. On June 25, 1931, the button was returned by special delivery mail with the following letter:

"You will enclosed find under separate letter the button you had ask me for. I passed same yesterday *noon* (June 24, 1931), without any pain nor colic. I really did not know I had pass same until I found it so we clean and put it in hot water. I am feeling well, etc., etc., . . ." The patient will return in four weeks. He is apparently well on the road to a complete cure.

SPECIAL FEATURES OF BUTTON NUMBER 5.

1. The core or the union of the male and female sleeves is simple, safe, works smoothly, and can not get easily out of order.

2. By using larger metal washers and larger rubber gaskets with the same core and same stylus points, different sized openings can be made. By this means, three different sized cores with many varied sizes of metal washers and rubber gaskets, the opening of the anastomosis can be enlarged or reduced to any size desired.

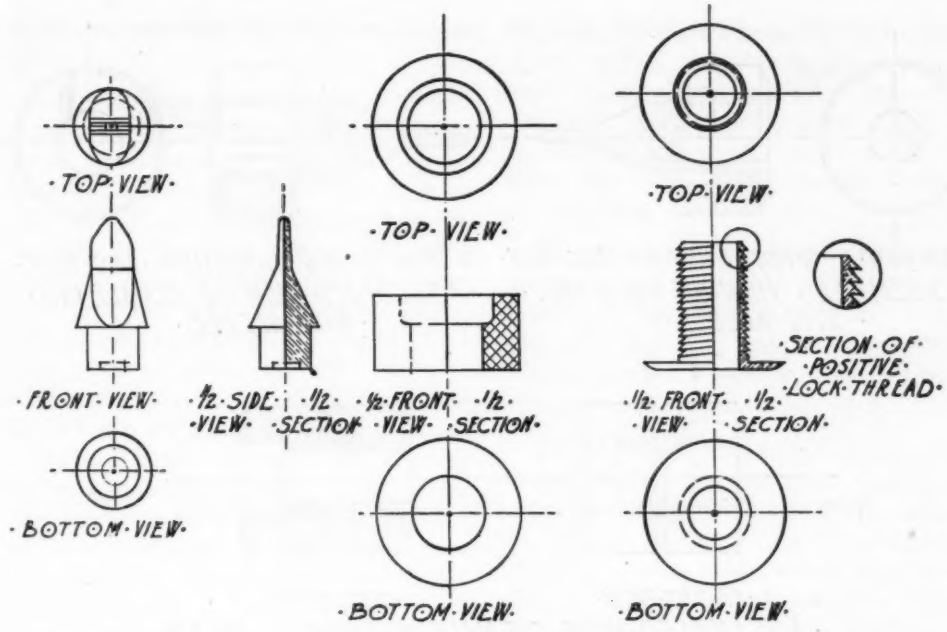
3. A slightly larger or an oval rubber on one side will, if there is any doubt in the mind of the surgeon, insure the button's dropping to the side of the larger washer.

4. By using the stylus and closing the open end of each unit, an aseptic anastomosis, without sutures, can be made as the punctured bowel or stomach fits over the stylus and on the sleeve as tightly and snugly as the glove on a finger. The stylus, or needle, is removed from each half just before approximating the male and female units in order to snap the button.

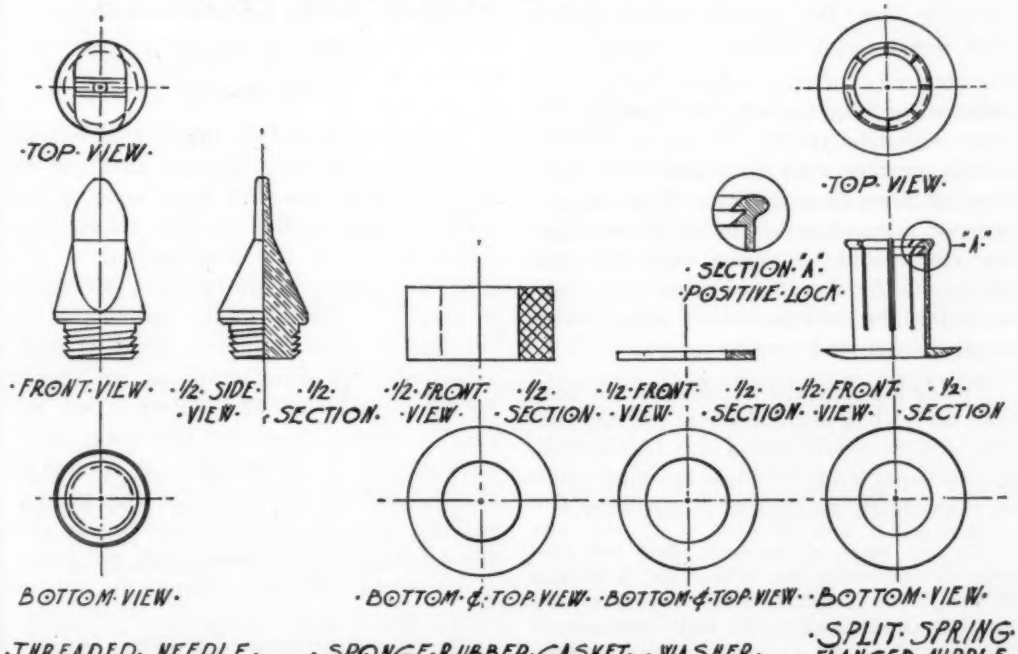
5. Without the stylus the button can be used as a round Murphy button.

6. Reconstruction of the canal can be rapidly and safely effected after an extensive resection, if one-half of the button is dropped in each open end.

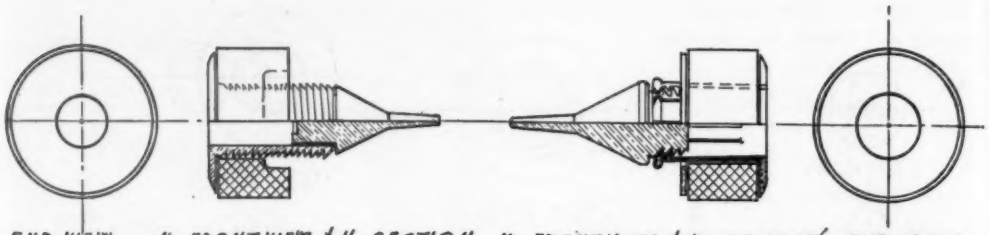
7. The right angle or positive lock thread on the male sleeve and the right angle or positive look on the female sleeve insure absolute safety.

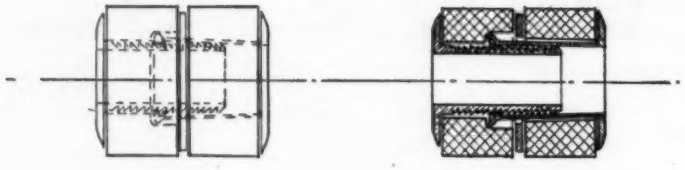


DETAIL OF MALE UNIT



DETAIL OF FEMALE UNIT





8. The experiments seem to prove satisfactorily that the sponge rubber gasket with metal faced washer is entirely safe, the integrity of the rubber being little affected by long contact with gastric and other digestive juices. If one so desires, a metal washer with one-eighth inch collar dropped down from its outer circumference capping a spiral steel spring of the same diameter, could be placed over the split sleeve of the female unit, in this way, deplacing the sponge rubber gasket with metal washer and spring.

Up to this time the button has not been used for end to end intestinal anastomoses where slight modifications may be required. Experiments a'ong this line are now under way, on which we hope to report later.*

*For the hours of intensive effort and hard labor in overcoming the defects and developing the mechanical simplicity and efficiency of this button, I am indebted to Mr. C. F. Demandre of the Surgical Supply Company of New Orleans, who has made all of the buttons used and without whose help this work could not have been accomplished.

THE DIAGNOSIS AND SIGNIFICANCE OF SPLENIC ENLARGEMENT.*

J. BIRNEY GUTHRIE, M. D.,†

NEW ORLEANS.

The spleen is not an organ that carries on its function in a manner that can be watched with ease. We have none of the thrill in examination of the spleen that comes to us in the examination of the heart and lungs, whose location, variations in density or size, mobility and sounds incidental to their functions, gives us daily experiences of satisfaction as we search for abnormalities. The spleen does not usually make a noise; but like many other members of a community, it functions silently and in seclusion for the general welfare. Changes in its volume are, by our present methods of examination, not usually perceived until the change in volume

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has become manifest to a very considerable degree.

The spleen lies normally in the abdomen in contact with the diaphragm and sharing in its movements and those of the stomach. Its long axis is in line with the tenth rib. It is inclined obliquely in two directions to the body axis—"from above downward and outward and from above downward and forward" (Cunningham). Its inner end approaches the median plane of the body to within 3.7 c.m. Its outer end about reaches the mid-axillary line. (Quain) In the adult it is about 12 c.m. in length, 7.5 c.m. in width and 3 c.m. in thickness. It is supported by ligaments derived from the peritoneum, the lienorenal and the gastrolienal. It rests on the phrenocolic ligament. The pedicle of the spleen likewise acts as a further support. The spleen also is in relation with the left kidney, the stomach and the tail of the pancreas.

Because the spleen may be removed in a normal animal with a fairly prompt return to normal health, there were some who have regarded the organ as perhaps vestigial, having served its purpose in the erythrocytic hemopoietic system in fetal life. The production of red blood cells by the spleen in adult life is doubtful. There, however, can be no doubt that the destruction of red blood cells occurs within the spleen itself, or elsewhere, as a result of a lowering of resistance of the erythrocyte in its passage through the spleen by a substance elaborated by the spleen and also as the result of actual phagocytosis in the spleen by the endothelial cells of this organ. This is easily observed in tissue examination together with the deposits of iron bearing compounds (hemosiderin) resulting from this phagocytosis. It is believed that iron resulting from hemolysis is stored in the spleen to be again utilized in future erythrocytic hemopoiesis, the iron of the food being stored in the liver. The elaboration of a substance activating the bone-marrow has been attributed to the spleen. Fresh spleen extract injected into the peritoneum of animals after splenectomy has been found to bring about an increase in the red cell count. After splenectomy there is a large loss of iron amounting to 11 to 18 m.g. daily.

To the spleen has been attributed the production of uric acid and xanthin; because of the finding of the enzymes (adenase, guanase and xanthin oxydase) whose function serves to convert the nucleo-protein bases into uric acid.

The structures of the spleen are regarded as forming an important element in a system, called by Aschoff the reticulo-endothelial system. This is composed of the liver, spleen, lymph nodes, bone-marrow and hypophysis, whose members function in harmony and which collectively possess a role of great importance in the reaction of the body to infections. The great problem of immunity involves the study of this system. Associated with immunity is cell-allergy and its almost unlimited field for future investigation.

The spleen is made up, in considerable part, of smooth muscular fibers whose contraction gives the organ a rhythmic reduction of volume. Muscle fibers accompany the trabeculae in the spleen. These have the power to contract intrinscially and also under the stimulus of symphathetic nerve èbers from the coeliac axis. This rhythmic contraction empties the organ of blood and its elasticity allows refilling during relaxation. The interval between contractions of the spleen has been determined as one minute in the dog. Thus we see an intrinsic self-contained circulatory apparatus that exists nowhere else in the body.

One of the most interesting pieces of experimental work on the spleen published in recent years is that of Barcroft[1] who measured the changes of splenic volume under different conditions by two methods: (1) Placing small metal clamps around the

edge of the organ, he returned it to the abdomen and closed the cavity, subsequently studying the animal by radiographs. (2) The second method consists in externalizing the spleen and studying the actual size of the organ after the recovery from the operation and under controlled conditions. He was thus able to confirm the previous observation that exercise and the process of digestion were accompanied by contractions of the organ. Of this work, Barcroft says "By either of these methods large alterations of volume of the organ may be seen rapidly to take place. So large indeed are they as to convince the observer that the spleen may, on occasion, contain perhaps one-fifth of the whole blood volume."

A most interesting part of Barcroft's work was an attempt at co-ordinating contractures of the spleen occurring as the result of artificial bleeding or exercise in animals with the subsequent increase in tissue blood-flow. The factor 10 has been determined by other investigators and may be used as a multiplier. If for example, the dog's spleen, in contraction, returns 100 c.c. of blood to the general circulation, the blood flow may be estimated by multiplying this amount by 10, thus increasing the general blood flow by 1000 c.c. or 1 Liter. The direct method of measuring the externalized spleen and calculation of resultant circulation by using the factor of multiplication constitutes a method which gives us a new concept of the "Buffer" function of the spleen which adds a fascinating chapter to the study.

Hitherto, methods of study have been confined to tissue-examinations by microchemical methods, before and after splenectomy, before and after injection of hemolytic substances of chemical or biologic origin; and tissue and blood examinations in disease associated always with cytologic determinations. Analyses of metabolic determinations have also contributed their quota to our information regarding the spleen.

Pathology has furnished material and conditions which in the great majority of instances can not be produced experimentally, and it is to the clinic that we are forced to go for further study.

Osler in 1908[2] gave a classification of diseases which are accompanied by splenomegaly which we have appended below:

CAUSES OF SPLENIC ENLARGEMENT—OSLER.

1. In Children:
   a. Disturbances of metabolism, rickets, amyloid disease.
   b. Chronic intestinal affections.
   c. Large but ill-defined group of intestinal disorders particularly in the tropics.
   d. Pseudoleukemia infantum (von Jaksch's anemia).
2. Infections:
   a. Syphilis.
   b. Malaria.
   c. Kala-azar and other forms of tropical splenomegaly.
   d. Hodgkins disease.
   e. Tuberculosis.
3. Blood Forming Organs:
   a. Leukemia.
   b. Pernicious anemia.
   c. Chlorosis.
   d. Hemochromatosis.
   e. Polycythemic splenomegaly.
4. Cirrhosis of the Liver:
   a. Syphilitic.
   b. Alcoholic.
   c. Hypertrophic cirrhosis of Hanot.
5. Hereditary and Familial:
   a. Congenital acholuric icterus.
   b. Constitutional disturbances, dwarfing, etc.

6. New Growths:
   a. Sarcoma.
   b. Primitive endotheliomata of Gaucher.
   c. Echinococcus.
   d. Schistosoma of Japan.

7. Splenomegaly not associated with any of above or with any known cause:
   a. Banti's disease with 3 stages.
   (1) Simple enlargement.
   (2) Splenomegaly with anemia.
   (3) Splenomegaly with anemia, jaundice and ascites.

To the above must be added under Class 3. Hemolytic Jaundice; congenital and acquired; and under Class 6. Nieman-Picks disease, by some regarded as a sub-type of Gaucher's splenomegaly.

We have added a few captions to Osler's list that have been worked out since his publication; and shall not discuss these at length because of limitation of time.

In looking over case histories made under trained supervision of say, acute congestive heart failure, one is struck by the frequentcy of cases in which massive enlargements of the liver are described with no enlargement of the spleen. In some of these cases, time may not have been sufficient for fibrosis to occur in a liver or spleen as a sequel of the circulatory stasis. Yet if we are to judge perilobular pressure by the size of that organ (liver), there must be a very considerable pressure on the portal radicles and in consequence a marked obstruction in the splenic vein. In all the experimental work on the spleen, venous obstruction has brought about a prompt increase in the size of the spleen. The classical bimanual palpation of the spleen has probably been attempted in these cases of acute heart failure and has failed to outline the lower extremity of a spleen which we may be sure is enlarged sufficiently to cause protrusion of the lower pole below the costal arch. We are frequently told how useless palpation is in the presence of ascites or other types of abdominal distension. Watching others work with such cases, the writer has often seen the lower and anterior edge even of a liver extending perhaps to the level of the umbilicus, missed in abdominal palpation because of accumulated, fluid, gas or exaggerated contracture of the abdominal muscles.

Percussion fails to give us our most accurate data on the size of the splenic outline. We must resort to palpation of the portion of the spleen which protrudes in inspiration below the border of the ribs, using percussion for the covered portion. Here the lightest possible touch, one which only dents the abdominal wall to the extent about 2 to 3 m.m. in depth, will often give us information that the classic bimanual method of palpation of the spleen fails to furnish. Our wish would be to get an approximation of the information that Barcroft obtained in his dogs. The writer believes that distrust of such a possibility makes for a lack of effort in this direction. A review of the literature of splenic rupture gives one a certain degree of caution in palpating a blood-distended spleen which has not been reinforced by fibrosis. No such case has to the author's knowledge yet been recorded.

The method of light palpation, first described by Pottenger[3] is especially adapted to thoracic diagnosis. Pottenger briefly describes its use in an adaptibility to abdominal diagnosis; but has not especially studied it in as applied to the spleen.

The technic the writer uses is to have the patient be near the edge of the bed on his back with legs slightly bent. The examiner seats himself near the left shoulder of the patient with the forearm in line with the hand and the examining fingers also slightly bent and the forearm parallel with the patient's body (re-

laxed). The left hand is first placed on the abdomen and moved about to reassure the patient against pain. The examination is begun in the right inguinal region and the fingers gradually drawn obliquely upward dipping in as the hand moves toward the tenth left costal cartilage. When a signal of resistance locates roughly the denser structure a pause for more minute investigation is made. When the "sounding" shows "density" a lateral movement to each side is made following the outline of the denser structure and finally deep respiration is invoked to determine motility in time with the diaphragm. Modifications of this technic serve for palpation of the entire abdomen. Heavier palpation is sometimes necessary to supplement the preliminary survey made by light touch and to note variations in texture and hardness.

CONCLUSION.

The results of physical examination of the spleen as usually done are not satisfactory, especially in the spleens of soft structure. A more perfect appreciation of the size of the spleen in clinical work would enable us better to direct the use of the hematologic and metabolic laboratory data and would increase the definiteness of study of some at least of the clinical conditions accompanied by enlargement of the spleen.

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DISCUSSION.

Dr. W. A. Love (New Orleans): Preamble—To condense the physiology we have the following warranted deductions regarding the spleen:
1. Contractable Organ.

a. Systole and diastole equal about one minute. It enlarges during the digestion of food, reaching its height of enlargement in five hours and returns to its normal size in seven hours. In this it co-acts with the pancreas in its function of transforming trypsinogen into trypsin.

2. It acts as, but is not, a true lymphatic gland in contracting infection, syphilis, etc., but this function is not essential to life and the removal of the spleen does not produce a minus phase in the lymphatic drainage of the body katabolism.

3. In contracting and expanding during its once-a-minute systole and diastole it fills and empties the depository for old and decrepit red blood cells, and also by means of a chemical process saves the valuable constituents of these cells, such as hemoglobin, to be utilized in the formation of new red blood cells and to furnish pigments such as are needed by the newborn red cells, the bile and for the regeneration of depleted hemoglobin. Some physiologists claim that wornout leukocytes and phagocytic white blood ceels are also junked in the spleen and the usable residue passed on to the tissues that have to do with the reformation of this residue into active white blood cells.

The spleen, like the tonsil, thymus, ovary, testicle and appendix, is actively associated with the glandular activity of the body in inverse ratio to the age of the body—the older the lesser in activity.

The spleen has been the most neglected organ in the body, in my opinion, from a clinical standpoint. The physiologists for the past twenty years have agreed as to its functions, but we, as clinicians, have neglected to correlate what the physiologists have taught us with what the changes in the spleen, its size, shape, contour, etc., can indicate to us at the bedside.

Our essayist, under whom I have had the pleasure of studying since 1919, has converted me to the realization of the necessity of evaluating the spleen as an organ that tells its story almost as convincingly as can the heart. Since realizing the value of a study of the physiology of the spleen and of its changes in size and consistency during primary and secondary disease of this organ, I have become so interested that I have actually learned to palpate and percuss the spleen with a fair feeling that my outlines are accurate.

Dr. J. H. Musser (New Orleans): When Dr. Guthrie prepares a paper there is very little left that can be said.

The subject of the physiology of the spleen is undoubtedly extremely interesting. When all is said and done we know less about the organ than we do about any other organ in the body. We do know some facts, but, after all, they are facts which are really of comparatively little value.

I think the one important thing we do know about the spleen is that it can be removed without injury to the patient. The old marathon racers used to have their spleens removed with the idea that they would be better runners and apparently they were, because they continued to run over some period of years.

There is one thing about Dr. Guthrie's paper I would like to accentuate, and that is the value of percussion. When I was an intern some years ago in a Pennsylvania hospital one of the details in the watching of our typhoid fever patients that we had to carry out was the daily measurement of the spleen. Those of you who have attempted to palpate spleens and percuss spleens, particularly in the presence of abdomens which are frequently very much distended as they are in typhoid fever, realize that such a procedure was one accomplished with a great deal of difficulty. We could not actually do it with any great degree of satisfaction. I did learn, I think, that the percussion of the upper border of the spleen sometimes gives us considerable information. The spleen is enlarged upwards as well as downwards, and if we find impairment of our percussion note an interspace or two interspaces higher than the normal ninth to eleventh area of dullness, it is perfectly obvious that the spleen is enlarged up. I have taken advantage of that particular method of percussing or attempting to delimit the outer border of the spleen by percussion and have often found it given me information which I know otherwise I could not obtain.

Dr. Guthrie has called attention to percussion of the spleen. I must say I think it is a method which is too frequently neglected and one which does help us considerably to determine the presence of a splenomegalia.

Dr. J. Birney Guthrie (New Orleans): I appreciate very much the discussion of the paper brought out. Any man who reads a paper on the spleen and has Dr. Musser discuss it ought to count himself lucky.

The doctors are playing battledore and shuttlecock with their compliments, but in looking over the literature on the spleen one finds Dr. Musser's name written into the literature. As I told him this morning, he has about grown up or matured in a splenic atmosphere. He has probably actually taken part in more work on the spleen than anybody here, and yet it is rather a striking situation to have him get up here on this platform and tell us how little any of us know about the spleen.

As regards percussion, I wrote three or four pages on that subject, which I left out in the reading of my paper. I should like to have opportunity of discussing this method in the paper, but time was lacking.

We are told in the literature that percussion of the spleen is a very unsatisfactory thing, for the reason that the spleen lies against two gas-containing organs, the splenic flexure of the colon below and the stomach above; then just through the diaphragm lies the left lung, so if we are going to percuss out the upper border of the spleen with any satisfaction we are going to have to do an artistic piece of work and must tune our instrument so that when a change in density is encountered in our percussion we get the impression of it. All there is to the light percussion method is the use of a minimal stimulus, and it is the only method I believe would serve in this service.

Henry Hultz, of Grand Rapids, in the early days of the roentgen ray, about 1903, made the statement that, as regards the interpretation of a radiography, "the density is there and it is for the radiologist to determine existing differences in density." If we can transfer that to methods of physical examination we can say that the differences in density are there and if we fail to get them it is because we do not try hard enough or the methods are destroying our contrasts by stimuli of over-intensity—striking too hard.

It is surprising to see what we can do in the way of palpation or percussion when we work with hope of success, but if we pound the chest and set the whole bell of the thorax into vibration together with the mattress underneath it, we are not going to be able to bring out minute differences which actually exist. These are not so minute after all, but the covered up solid spleen, lying in a bed of gas-containing organs, should be easy to locate, and it is easy if we properly tune the instrument for the percussing and plessimeter finger to the region where we are working, using always the minimal blow that will give resonance in the unimpaired region.

RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE.†

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AND

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PHILADELPHIA.

Heart disease is unquestionably the chief cause of death; its incidence moreover is increasing. These facts make it the most pressing public health problem. The program of every organization, which is answering the challenge of this problem, includes the prevention as well as the relief of heart disease. If prevention is ever to be accomplished, the starting point should be children and young persons and the disease to be attacked is rheumatic fever. Of this fact our profession is now keenly aware with the result that the disease has received a great deal of study within recent years. This effort has greatly broadened and extended our conception of it.

The old conception of rheumatic fever, the one that was taught until very recent years, was that it is a disease primarily of the joints with the heart being involved as a sort of complication in a certain percentage of cases. This picture is entirely inadequate, as we all know today. The disease we are considering is as protean and varied in its manifestations as tuberculosis or syphilis. Swift[1] is responsible for first calling attention to the clinical similarity of rheumatic fever and tuberculosis. Just as tuberculosis may attack the skin and joints, so may rheumatic fever. Tuberculosis often attacks the nervous system, causing meningitis; when rheumatic fever invades the nervous system, we see chorea. Tuberculosis, of course, most frequently attacks the lungs and pleura; rheumatic fever likewise not infrequently involves these structures. It differs from tuberculosis, however, in this way: regardless of what organs or structures outstandingly manifest signs of the disease, the heart is practically always involved.

It behooves us therefore to think of rheumatic fever as a disease with a multiplicity of manifestations and sites of involvement, and not to consider it simply a disease that causes arthritis with an occasional involvement of the heart.

That such a conception of rheumatic fever as we briefly outlined is not radical is shown by the fact that out of every one hundred cases of fully developed heart disease of a form known to be the result of some antecedent rheumatic infection, not over fifty of these one hundred patients will give a history of ever having had rheumatic fever. This can only mean that fifty out of every one hundred cases of rheumatic fever exist without the patient himself, or the patient's parents, or the patient's physician realizing that rheumatic fever is present. It is this 50 per cent that has previously gone unrecognized that we wish particularly to emphasize.

Let us therefore briefly discuss some of the main features of this disease.

THE CAUSE OF RHEUMATIC FEVER.

Every feature of the disease indicates that it is the result of an infection. It was natural to attempt to fix the blame on some one specific organism but this has not been successfully done. A study of the past literature will reveal that something over 100 organisms have at one time or another been considered as the cause of rheumatic fever. As a part of this conception, it was thought that this organism gained entrance to the blood stream, and lodged in different parts of the body, and that the tissues changes that we associate with rheumatic fever were responses to the direct presence of these organisms. Swift[2] is largely responsible for calling our atten-

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tion to what at present seems to be the most satisfying theory of the disease; a theory which regards rheumatic fever as being the result of not one organism but many different strains. Let us consider then for a moment his theory of the three possible hypothetical factors dealing with the role of streptococci in rheumatic fever:

1. Elective localization.
2. Specific streptococci elaborating a specific toxin.
3. Rheumatic fever as an allergic phenomenon.

Against the theory of elective localization may be brought the evidence that the infection in rheumatic fever is practically as widespread as syphilis.

The hypothesis of a specific streptococcus rests on the recovery of indifferent streptococci in blood cultures from a few patients with the disease; on the effect on the course of the infection of an immune serum prepared against these cocci; and finally, on the action of a vaccine prepared from them. Hitchcock[3] has recently shown that indifferent streptococci are practically as frequent inhabitants of the throats of the non-rheumatic indivduals, and that the strains recovered belong to different immunologic groups. Hence, indifferent streptococci may and probably do play a role in some cases, but no more an exlusive role than any other strain. Indeed, it has been shown by Cole[4] and Bull[5] that the strains recovered from persons with the disease produce the same lesions as do those recovered from the throats of non-rheumatic persons when injected in large amounts into laboratory animals. Such experiments throw doubt on the causative role of specific streptococci.

The allergic hypothesis offers a reasonable explanation of the protean manifestations of rheumatic fever. Under this conception the tissue changes of rheumatic fever are not believed to be the result of the direct presence of organisms but are the result of an allergic response on the part of tissues that have become hypersensitized to the bacterial poisons of organisms that are perhaps localized in various foci. Swift[2] has shown by the production of focal lesions in rabbits with certain nonhemolytic streptococci that he was able to produce a state of hypersensitiveness similar to that described in tuberculosis. This offers a very strong clue to the solution of the problem. The point to be emphasized here is that production of focal lesions seems to be necessary for the induction of the allergic state and that, once present, it can be maintained by inoculation of the tissues with doses of streptococci that are practically innocuous for normal animals. The experimental demonstration of both a hypersensitive and an immune type of reaction toward the same nonhemolytic streptococcus seemed to Swift[6] and his coworkers transferable by analogy to the clinical condition of patients with rheumatic fever and subacute streptococcus endocarditis, respectively. The former show a marked tissue reaction to some irritant, either a bacterial body or some soluble toxin. The tissues of a patient with subacute endocarditis do not show the same overactivity to streptococci.

One can say nothing more definite than this as to the cause of rheumatic fever. The weight of evidence at present rather strongly recommends the allergic theory, however, with the question receiving such intensive study, it seems almost certain that before long the cause of this disease will be definitely known. When this occurs, our first big step toward the prevention of rheumatic fever will have been taken.

THE FREQUENCY OF INVOLVEMENT OF THE HEART IN RHEUMATIC FEVER.

In the older teachings cardiac involvement was thought to be a complication of rheumatic fever. At present it is considered a part of the disease. If rheumatic fever is present, one is justified in assuming that the heart has been involved to a

greater or less extent in practically every instance. If one judges by the ordinary physical findings in the heart, cardiac damage may not be detected in a fairly large number of cases, but it exists nevertheless. If one considers the electrocardiographic evidences, damage to the myocardium can be shown to exist in something over 90 per cent of all cases of rheumatic fever. The safe course for us as clinicians to follow is to regard the heart as damaged in every case of rheumatic fever until careful observation over a period of months has definitely proven that it is not.

THE COURSE OF RHEUMATIC FEVER.

Formerly, this disease was considered a self-limited one. It was thought that an attack of rheumatic fever lasted for two, three, or even as long as six weeks, and then was ended. Our attitude at the present time is very similar to that held by lung specialists in regard to tuberculosis. It is difficult to get a careful lung specialist to speak of tuberculosis as being cured. He may consider it inactive, arrested, or quiescent, but he hesitates to speak of it as cured.

This is the attitude we now hold toward rheumatic fever. We believe that the disease may become inactive but we are loath to say it is cured, in children at least, until months, or years of inactivity have passed. It may remain as a disease of mild or slight activity, perhaps not active enough to give much if any temperature; yet it is present and continually may be damaging the heart.

This conception enables us to understand better the fact that once rheumatic fever has appeared in children, other "attacks" are apt to occur. The older view was that these were separate new infections with complete recovery between. Our feeling now is that these "attacks" are really exaccerbations of an infection that has continuously been present though its activity may have been of such a low grade its presence escapes notice. Let us emphasize here as we hope to do later that rheumatic fever does not cause any arthritic symptoms in nearly one-half of its victims.

This new conception has led us to assume that every attack of rheumatic fever, in children at least, is an infection which will last not weeks, but months, or years. This attitude has of course modified our whole form of treatment. At the Children's Heart Hospital in Philadelphia, an institution devoted solely to the treatment of children with rheumatic fever, the average duration of every admission is nine months. We have repeatedly had children there who have continuously shown evidences of a low-grade rheumatic infection for years.

THE CONTAGIOUSNESS OF RHEUMATIC FEVER.

There are many facts available that at least raise the suggestion that rheumatic fever is a mildly contagious disease. Its existence in more than one member of a family;[7, 8] apparent epidemics of the disease[9, 10] and the fact that children show less tendency to recurrences while in special convalescent homes,[11] but are more subject to relapses once they return to their own homes than children who have not been in special institutions[12] are some of the reported evidences that bear on this point. Paul[13] has shown in a convincing manner the connection between respiratory infection in one member of a family and the development of rheumatic fever in another member of the same family.

THE DEVELOPMENT OF IMMUNITY TO RHEUMATIC FEVER.

If we accept a streptococal spetiology for rheumatic fever, there is in childhood ample opportunity for the tissues to become sensitized by repeated small invasions of streptococci or their soluble toxins from foci in the tonsils, teeth, nasal sinuses or respiratory tract. This primary invasion may at first produce no definite signs of disease. However, a process of

sensitization has been going on, and when a fresh attack of tonsillitis, or rhinitis, occurs, manifestations of arthritis or carditis may become evident as a result of the acquired bacterial allergy. At this early age arthritic symptoms may be slight or absent and the whole picture one of overwhelming cardiac infection from the start.

In the young, a period when acute manifestations are the rule, rheumatic fever commonly assumes a generalized form. When a degree of immunity has become established later in life, the disease is more apt to become localized. We commonly see more frequent and severe joint lesions in adults than in children. As age advances there seems to be a tendency on the part of the body to restrict the activity of the virus to smaller areas. This process undoubtedly takes place in tuberculosis and syphilis, why cannot the same process proceed in rheumatic infections? With repeated infections, it seems reasonable to suppose that the disease becomes more chronic with the formation of more and more fibrotic tissue. The end results in the heart of these repeated insults may well be the development of an adhesive pericarditis or a stenotic mitral valve.

The tendency of rheumatic fever in children is toward chronicity; and transitions between chronic cases and cases showing apparent complete recovery are not uncommon. There is, however, a tendency for the infectious agent to persist in the body for years and we see patients in their second or third attack whose primary manifestation of rheumatic fever occurred years before. Each succeeding attack tends to be more localized and the severe generalized reactions fade from the picture. Thus, the process of immunity becomes established and the infection is arrested. Nevertheless, we must be prepared at any time to see a reawakening of activity in rheumatic fever just as we commonly do in tuberculosis.

THE EVIDENCES BY WHICH THE ACTIVITY OF INFECTION IS JUDGED.

Fever. At some stage of rheumatic infection some degree of fever is probably present. It may be very high or it may be just above normal. It may last for weeks, or it may exist for no more than a few days. Yet, even when fever is not conspicuous or even present, the infection may still be active and may be progressively damaging the heart. This point needs great emphasis.

One should remember that this disease often runs a very low-grade chronic course with a tendency to recurring small or large bouts of fever; with each recurrence of activity the heart is apt to suffer more severely. Therefore, the physician must be on the watch for every sign of activity as they are warnings not to be neglected. In the figures (1 and 2) are shown the temperature charts of two patients in the wards of the Pennsylvania Hospital, one has fever and the other only a slight temperature. One (Fig. 1) had a well-marked pneumonia and was desperately ill. The other (Fig. 2) had all the evidences of a severe rheumatic carditis, including pericarditis in spite of the slight temperature reaction. Neither had any joint manifestations.

Cardiac Failure. If a child is showing evidence of cardiac failure, at rest, it may be fairly assumed that such a child has an

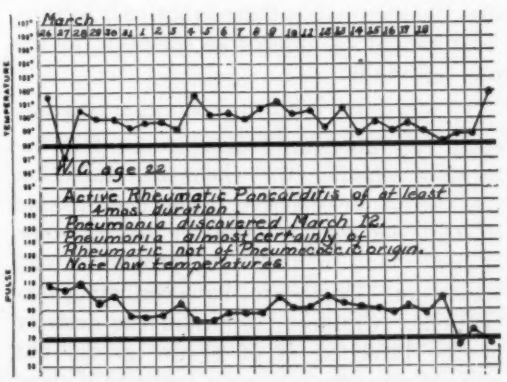

Fig. 1. Temperature chart of a patient with a severe rheumatic pancarditis and pneumonia. Note the low temperature and pulse rate.

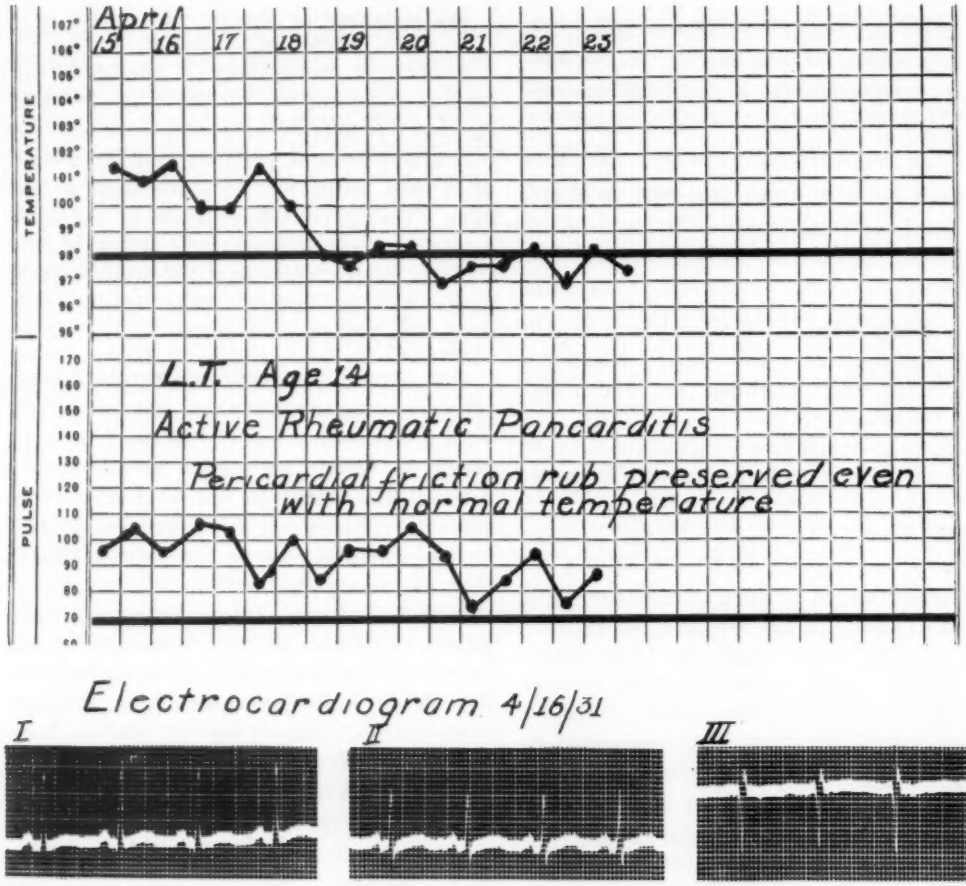

Fig. 2. Temperature chart and electrocardiogram of a patient severely ill with rheumatic pancarditis. The chart illustrates the low and even absent temperatures frequently seen in active rheumatic infection. The electrocardiogram shows the characteristic "notching" of the T waves, a finding always very suggestive of an active rheumatic carditis.

active infection; for a child's heart will rarely fail regardless of the existing cardiac damage unless there is active infection. This cannot be applied so certainly in the case of adults.

Leukocytosis. We use to feel that we could rely upon the leukocyte count to determine whether the rheumatic infection was active or inactive. Repeated counts in children would seem to be of some clinical value in diagnosis, prognosis, and treatment. There are, however, many exceptions. Children, in whom the activity of the infection is of a low grade, but present nevertheless, may frequently show white blood counts below 9000. The average leukocyte count in children with active infection will be slightly above this figure.

There are numerous instances also where even with very severe infection we see little or no increase in the white blood count. Let us cite an instance:

C. P., a young colored woman of twenty-one years, entered the Pennsylvania Hospital, because of fever, breathlessness, weakness, and severe cardiac pain. For three days, her condition was critical, her pulse being so weak that at times it was barely perceptible. The heart showed a soft systolic murmur, a gallop rhythm, some enlargement and rapidity. The electrocardiogram showed evidence of muscle damage. It was obvious in the presence of these findings and fever that some infection of the heart existed. Because the leuko-

cytes were never above 7000, we tentatively diagnosed the infection as tuberculosis. But she began to improve, and in six months left the hospital relatively well. Within a year, however, there had developed a definite mitral stenosis, which proved conclusively that the infection had been rheumatic fever. Yet, the leukocyte count during the active stage of the infection had always been between 5000 and 7000.

Weight. When a rheumatic infection is quite active, there is usually an accompanying loss of weight, but this is not an infallible guide to activity of infection. Children who have an active but low-grade infection may gain weight steadily.

Anemia. Often low blood counts accompany rheumatic infection; on the contrary, the blood count is not infrequently normal. However, when anemia is present, it is of some help in recognizing the presence of an active infection. It is particularly helpful when anemia, once present, disappears.

Pulse Rate. Rapidity of pulse is a sign of confusing value. A persistent tachycardia over one hundred beats per minute, both when a chi'd is awake and asleep, is apt to be a sign of active disease. The pulse rate while asleep is often a very valuable consideration in estimating activity. It must be remembered that an active rheumatic infection may be present and the pulse rate unduly slow. The patient whose chart is shown in figure 3 began her active infection suddenly. The first symptoms were nausea and vomiting. Even before the temperature became very high, her pulse rate rose excessively, and directed our attention toward rheumatic fever as the cause of the fulminating infection.

There are no pathognomonic signs of rheumatic activity: it is often extremely difficult to say whether a rheumatic infection is or is not active. Perhaps on the whole, the most helpful and valuable sign is the patient's general appearance and color.

Pallor. The pallor of rheumatic fever is difficult to describe. This can be said:

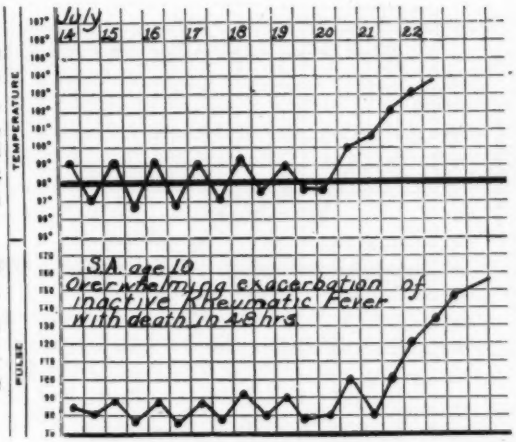

Fig. 3. Temperature chart of a child with inactive rheumatic fever who suffered a reactivation of the infection. The child was apparently perfectly well when the temperature began to rise and was dead in 48 hours. This illustrates the fulminant, virulent, overwhelming nature of rheumatic fever in its most severe and toxic manifestations.

it exists independent of anemia. It is best seen circumorally and over the back of the neck. To us it is striking and perhaps the most va'uable evidence we have of active infection.

SOME UNUSUAL MANIFESTATIONS OF RHEUMATIC FEVER.

Atypical Forms of Joint Involvement in Rheumatic Fever. The text book pictures of the joints during active disease are well known. We constantly see departures from this picture. Only one joint may be involved, and this may be a small joint. Inflammation and pain may be slight or even trivial.

Rheumatic Fever without Joint Manifestations. The vast majority of the 50 per cent of rheumatic fever that has gone unrecognized in the past has been of this variety. In children particularly do we see the infection manifesting itself as a carditis without any joint involvement whatsoever. This is also not infrequently seen in adults. The picture is one of an infection, mild, moderate or overwhelming with the heart the chief site of involvement. Usually one can detect some unusual sign in the heart that leads one to suspect it. These signs will be discussed presently.

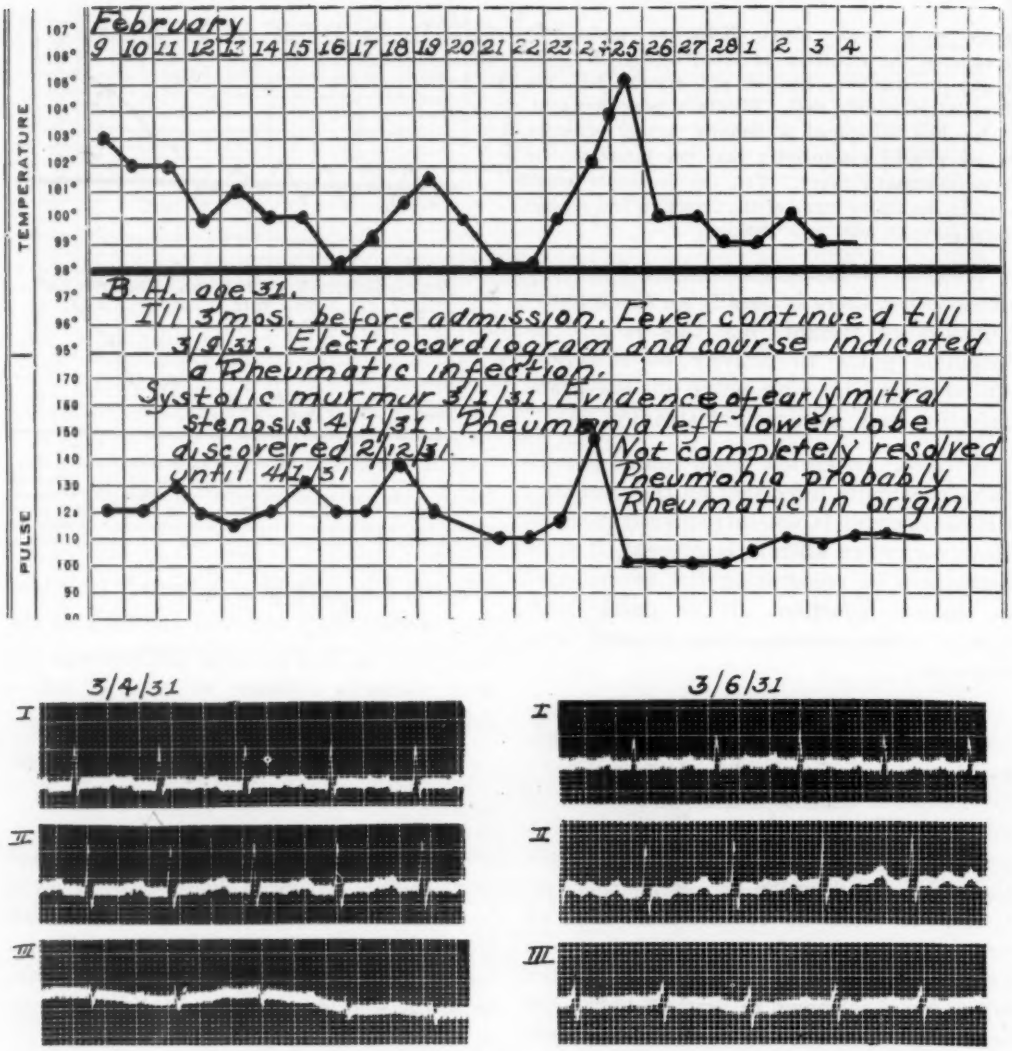
February
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 1 2 3 4
TEMPERATURE
PULSE
B. H. age 31.
Ill 3 mos. before admission. Fever continued till 3/9/31. Electrocardiogram and course indicated a Rheumatic infection.
Systolic murmur 3/1/31. Evidence of early mitral stenosis 4/1/31. Pneumonia left lower lobe discovered 2/12/31 until 4/1/31
Not completely resolved
Pneumonia probably Rheumatic in origin
3/4/31
3/6/31
I
II
III

Fig. 4. Temperature chart and electrocardiograms of a patient who was thought to have an ordinary lobar pneumonia and so treated until electrocardiograms showed a transient A-V heart block (prolonged P-R intervals). That rheumatic fever was actively present was shown not only by the electrocardiographic changes but by the subsequent development of mitral stenosis.

When joint manifestations are not present and when the cardiac signs are not convincing the recognition of rheumatic fever is extremely difficult. Under these circumstances the electrocardiogram is of immeasurable aid.

Chorea. This condition is simply the result of an involvement of the nervous system by rheumatic fever. This manifestation of the disease insidiously damages the heart as do the commoner manifestations of the disease. It will not be further discussed.

Rheumatic Pneumonia. The frequency of pneumonia during rheumatic fever has been known for a long time. Many writers have mentioned its high incidence. It is only recently that the pneumonia of rheumatic fever has been considered a specific entity that differed pathologically from other forms of lung consolidation. Gouley and Eiman[14] have studied the dis-

ease and believe that it is primarily an interstitial pneumonitis and that the basis of the pathology is swelling of the endothelium of blood vessels.

The clinical picture differs from that presented by an ordinary lobar pneumonia. The charts of two patients are shown in Figures 4 and 1. In the first case, the low temperature and decidedly slow pulse rate are out of keeping with the usual picture of lobar pneumonia. This patient, however, was regarded as having a pneumococcus pneumonia and so treated until an electrocardiogram revealed changes characteristic of rheumatic fever, and the true nature of the pneumonia was established. The second patient, a young man of twenty-one, with an old rheumatic heart, presented every possible evidence of a severe and overwhelming rheumatic carditis. In addition, he had complete consolidation of the lower right lung with loud bronchial breathing and all the other signs of a solid lung. His temperature chart is striking. It is little if any above the normal run in spite of the sever pancarditis and pneumonia. Paul[15] called attention to the frequency of involvement of the lower left chest during rheumatic infections. In fifteen cases which died with active rheumatic infection there was some involvement of either the left lower lung or its pleura in every case. The usual site of penumonia in rheumatic fever is the left lower lobe, but, as the second case we have cited illustrates, this is not an invariable rule.

Rheumatic Peritonitis. Examples of definite rheumatic peritonitis have been reported.[16] Holsti[17] has stated that the vesse's of the gastro-intestinal tract are invaded with arteritis verrucosa more frequently in rheumatic fever than in any other malady. In this connection, the studies of Holsti assume even great significance. Thus the cases one not uncommonly sees with adhesive pericarditis and a chronic involvement of the peritoneum are not unlikely end results of an old rheumatic infection.

This completes our attempt to emphasize the fact that rheumatic fever can involve almost any portion of the body. A correct appreciation of this is essential to a correct recognition of the disease.

The important assumption that we should make is that no matter where the conspicuous and outstanding manifestations of rheumatic fever may be, the heart is always involved to a greater or less degree. This is important not only because damage to the heart is the ultimate result that we dread and attempt to avoid, but also because recognition of the cardiac involvement will directly aid us in recognizing a given infection as rheumatic.

THE RHEUMATIC HEART.

The Pathologic Changes of Rheumatic Fever. The characteristic lesion that results from rheumatic fever is the Aschoff body, which consists essentially of a coltion of round cells around or near a blood vessel. Such lesions are part of a process which destroys the invaded tissue and in healing leaves behind fibrosis. There is another important pathological manifestation in rheumatic fever which there is a good deal of reason to believe is probably the fundamental cause of the pathological changes seen in this disease. We refer to the change in the endothelium of the blood vessels. These cells are almost always swoollen, a process which often goes so far as to completely occlude small blood vessels. These two lesions so far as we know are the only pathological manifestations in the heart or other organs of the disease which we are considering. Their presence we assume is the cause of the cadiac manifestations that we see during the acute stages of rheumatic fever and their healing by fibrosis is the cause of the end result of the disease, that we know so well as the old rheumatic heart.

The Sites of Cardiac Involvement in Rheumatic Fever. The involvement of the

heart by this disease is a pancarditis—the pericardium, myocardium and endocardium all being effected. Analyses of cases which have died during an active rheumatic infection have been made by a number of workers.[18, 19, 20] We quote from Paul and Graham's observations. Their series consisted of 18 cases. Pericarditis was present in every case. Involvement of the heart muscle is likewise seen in every instance. Every case also showed involvement of some valve. The mitral leaflets were affected universally, the aortic valve was involved in fifteen cases, or 8 per cent, the tricuspid in nine or 50 per cent, and the pulmonary valve in 2 or 11 per cent. When the acute infection is survived, these various involvements will heal by fibrosis; chronic and permanent damage will result in every site that has previously been acutely involved.

We must be prepared to meet less serious involvement. Occasionally one finds hearts where only one valve has been affected — the muscle and pericardium having apparently escaped or at least been involved to a trivial or undemonstable degree. On the other hand, one occasionally sees instances where the muscle, pericardium, or both, have been involved without demonstrable valve damage. It is quite possible that the entity known as Fielder's myocarditis or acute isolated myocarditis ([21] and [22]) is in reality a rheumatic invasion of the myocardium without accompanying endocarditis or pericarditis.

The Duration of Life After a Rheumatic Infection. As the series of Paul and others show, many victims of rheumatic fever do not survive the acute infection. We know of no disease that causes a more toxic picture in its fulminant form that rheumatic fever. The child whose chart is shown in Figure 3 was apparently perfectly well at the time the temperature began to rise; she was dead within forty-eight hours.

Statistics will vary somewhat but it can be said with relative certainty that, taken on the average, a patient who has been the subject of rheumatic fever, will be dead within a period of nine to twelve years after the initial infection. Such an average is of course determined by wide extremes.

On the hopeful side we must remember that there are quite a number of hearts that receive only a minimal damage from rheumatic fever and are little if at all handicapped in their subsequent life by this damage.

The rheumatic heart should be considered from two points of view: (1) The cardiac involvement and manifestations during the acute stage of rheumatic infection, and (2) the old rheumatic heart—the final result of the healing and scarring of the acute damage.

SOME OF THE ACUTE MANIFESTATIONS OF THE HEART SEEN IN THE ACUTE STAGE OF RHEUMATIC INFECTION.

It is not necessary to refer at length to the behavior of a heart that is the seat of an overwhelming pancarditis. It fails and may do so very rapidly.

Murmurs. Because of the great frequence of endocardial involvement, we expect and almost always find mumurs developing. The usual one is a systolic murmur at the apex. The diastolic murmurs of mitral stenosis and aortic insufficiency usually require time for their development. Bruits may change quite rapidly and may be no more conspicuous than the murmurs heard incidentally in a good many normal hearts, particularly when fever is present. The point we wish to emphasize is that, while murmurs are important and helpful, we cannot rely entirely upon their presence or absence in deciding whether or not a given infection is rheumatic.

Pain. Most cases of well-marked rheumatic pancarditis at some period have precordial pain. This may be intense or it may be mild and transient. Pain may

result from one of several different causes. It may have its origin in a rheumatic pleurisy; it usually is the result of pericarditis. At times the pain has the characteristics of an anginal seizure. Such types give ground for interesting speculation. We know the endothelium of the cardiac blood vessels is sometimes profoundly effected. It has been suggested that this process plays a role in the pain so frequently seen in acute rheumatic carditis.

Precordial Pain as the Earliest Manifestation of Rheumatic Fever. In a few instances we have seen precordial pain, sometimes severe, at other times, slight, as the first symptoms of rheumatic infection. Let us briefly cite a case which is at present under observation in the wards of the Pennsylvania Hospital:

E. W., aged 26 years, sought hospital care because of an unpleasant consciousness of her heart beating and because of attacks of what she described as severe precordial pain, which had existed for one week. On admission and during our observation of over a month, her temperature did not exceed one hundred degrees. We were unable on our first examination to discover anything in the heart or elsewhere to account for her symptoms and findings. The electrocardiograph on the day after admission, however, revealed changes significant of rheumatic fever. Three days after admission, typical joint manifestations appeared. These and a systolic murmur which developed, established the diagnosis of rheumatic carditis, but for more than one week, the only symptom or sign discovered was precordial pain.

Disturbances of Rhythm an Early Manifestation of Rheumatic Fever. Many disturbances of rhythm are seen during acute rheumatic fever. These have been reported in many papers. We wish here to emphasize that disturbed rhythm may be a very early or even the first manifestation of carditis.

H. G., a trained nurse, aged 19 years, had apparently been entirely well. She began her day's work unconscious of any ill-being. After she had been at work for a few hours, she began to feel feverish and to be disturbed by a very irregular heart action. When we saw her a few hours later, we only found a temperature of 101° and a heart action disturbed by showers of extra systoles, which she was certain were never before present. Our suspicion of some cardiac infection was confirmed by the appearance of typical rheumatic joints three days after the onset of her illness.

The diagnosis of rheumatic fever and cardiac involvement as we have indicated may be a difficult one to establish. We have, however, at our disposal a diagnostic means of the greatest importance. I refer to the electrocardiograph.

The Electrocardiograph Changes in Acute Rheumatic Fever. We will not consider this big subject here; the references cited will have to suffice.[23, 24, 25, 26, 27] There are certain electrocardiographic changes, by no means always present, that are almost pathognomonic of rheumatic carditis. The most important ones are elevation of the S-T interval, a suggestion of or an actual notching of the T waves and varying grade of A-V heart block. It is to be emphasized that all of these changes are transient, and if they are to be discovered, frequent electrocardiographs are usually necessary.

Some years ago one of us[23] called attention to the frequence of notched P waves and their importance in acute rheumatic carditis. After several years of further observation, we wish to qualify our previous comments only by stating that this sign is of most value when it occurs in Lead 1.

We personally believe that the galvanometer is one of the most important means at our disposal of recognizing obscure rheumatic infection. We would be decidedly unwilling to attempt to do this work without its aid.

THE END RESULTS OF ACUTE RHEUMATIC CARDITIS—THE OLD RHEUMATIC HEART.

The characteristic physical signs and pathologic changes are so well known that they need not be considered in this paper. Suffice it to say, that these signs and changes are the direct result of the damage done during the active infection. Before

dismissing the matter, there is one subject that we wish briefly to discuss.

The Clinical Course of Inactive Rheumatic Fever. The behavior of an old rheumatic heart is entirely different from that of any other form of damaged heart. For instance, a rheumatic and syphilitic heart may both show aortic insufficiency but the behavior and course of the two will be entirely unlike. Nothing better illustrates the importance of the etiological diagnosis of heart disease than this.

The course of a rheumatic heart is downward, but if there is no active infection, progression may be exceedingly gradual if reasonable care is exercised. There may be considerable periods when no progress in the deterioration can be detected; it only very rarely will be rapid or sudden. When the cardiac reserve does become diminished it usually can be readily restored a number of times—a behavior so different on the whole from the syphilitic heart! Many patients with old rheumatic hearts that are continually on the border-line of failure can remain at their work for considerable periods by resorting to the simple expedient of resting over the week-end. This sort of behavior is to us one of the most remarkable and characteristic features of the inactive rheumatic heart.

But in spite of its resiliency and its splendid recuperative efforts its course is downward. Nearly all will have run their course by the age of 50 years; a few will go beyond 60 years; and very rarely we encounter an old rheumatic heart which has completed the allotted span of three score years and ten.

The rate of deterioration, the length of life, and the general course are undoubtedly determined in the main by the degree of involvement of the muscles rather than the valves. Often rheumatic hearts that reach relatively ripe years present more valvular damage than some hearts which die much younger; the explanation is that the muscle of one escaped serious injury; the other did not.

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HOME TREATMENT OF TUBERCULOSIS.*

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The well conducted sanatorium offers the ideal conditions for the treatment of tuberculosis, yet we must recognize the fact that most patients who are suffering from this disease are obliged to be treated in their own homes; consequently it is necessary for us to familiarize ourselves with the principles of treatment and study the problems sufficiently closely to be able to surround the patient in his home with conditions as ideal as possible. To this end it is necessary to bear in mind that the condition which is often least difficult to supply is the one which is usually emphasized most, open air sleeping accommodation. The most difficult, on the other hand, and the most important, is to provide the patient with hopeful, helpful, co-operating influences. This requires a thorough training on the part of the attendants and those who must come in contact with the patient. Few patients possess sufficient self-control and the requisite degree of self denial to carry out a protracted regime amidst the distracting influence of the home; and few friends possess the judgment to associate with patients who are attempting to carry out such a program and afford them the moral support which is needed. Too much emphasis is laid on the open air sleeping porch and not enough on the surrounding influences.

The home treatment of tuberculosis will be successful in direct proportion to the manner in which sanatorium principles are established and carried out. By the term sanatorium principles is meant a carefully planned program of hygenic living, personal hygiene, regulated rest and exercise, food prescribed to suit the needs of the patient, and other measures which are directed toward increasing the patient's vitality and surrounding the patient with an atmosphere of cheer and hope.

The next most necessary thing to do is to definitely satisfy the patient and his family as to diagnosis. Make a thorough examination, roentgenogram of chest, and show the picture to the patient and family and point out to them the chest findings, provided it is not a far advanced condition that offers no hope of a cure. Examine sputum and if possible find the bacilli because this is the one thing that will satisfy the patient, his family and his friends, as to the correctness of the diagnosis. Take plenty of time. The diagnosis does not have to be made in a day and when the diagnosis is established to the satisfaction of the patient and family, enter into a frank discussion of the patient's condition and the program that is to be carried out. Give him some idea of the extent of his trouble and go thoroughly into the history of the case, also give him some idea of how long you think he has had tuberculosis and tell him all the favorable things you know about tuberculosis. Impress upon him the fact that tuberculosis is a curable disease and refer to some of his friends and acquaintances who have been cured of the disease and if you think he has a good chance of a cure tell him so but at the same time give him to understand that it requires absolute co-operation on his part. One of the first questions he will ask you is, "Doctor how long will I have to stay in bed?" Tell him frankly that you do not

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know the exact time that will be required and that the length of time varies in patients with the same amount of trouble, but the average case with the symptoms and findings that his case presents, usually are required to remain in bed from 6 to 8 months, or whatever time you think best to advise, and this depends on how soon his temperature and pulse return to normal and how well his condition responds to treatment. Do not make the serious mistake of telling the patient that he must stay in bed for any definite period of time for he will watch the calendar and inform you ahead of time just when his bed rest will be completed and then the trying time has come and you may have reached the point where you are going to lose the confidence of the patient. Now on the other hand, don't say that you are going to put the patient to bed for an indefinite period without explaining the way out on the other side. You might just as well tell him to get up and go on and die as soon as he can. Discuss with him the perspective course of treatment and tell him that he will possibly be in bed a few months. Then, if the progress of his case is satisfactory and his temperature has returned to normal for a period of two months, the expectoration has diminished noticeably, normal weight has been regained, the cough improved, and all other conditions is satisfactory, we will allow him to begin sitting up or recline on a comfortable chair 15 minutes each day. This will be increased five minutes a day until he is sitting up one hour in the morning and one hour in the afternoon and at the end of this time, if his condition remains satisfactory he will be allowed to walk about the house. After a short time you will allow him to dress and go to the dining-room to one meal a day and at the end of two weeks he will be permitted to go to two meals a day. At the end of another two weeks he may go to the dining-room for all your meals and may be able to walk about the house and the yard. After following this routine for two or three months, the patient may begin taking daily exercise walking 10 minutes a day and increase five minutes each day until the exercise lasts three or four hours a day. A schedule something like this will give the patient something to look forward to with hope and give him something deènite on which to base his fight. He must have a definite objective in view.

The patient and family must be prepared for the periods of activity that are sure to come and told that tuberculosis is a chronic disease, and runs an uneven course. They must be able to encourage, rather than discourage, the patient at these times. It is necessary for the physician to tell them what their attitude toward the patient should be and see that he obtains support in carrying out his program.

Now the arrangement of the room or porch should be discussed with the family and patient. Use either a well ventilated room or porch. Select a place that is satisfactory to the patient and convenient for the attendant. The next important thing in arranging an apartment for the tuberculous is to see that the room is plainly and simply furnished. It is best that no carpet be on the floor, curtains shou'd not hang at the windows, and there should be as little furniture in the room as is consistent with comfort. The room should be so arranged as to prevent accumulations of dirt and infectious material and so that it may be easily cleaned. It is necessary that the patient have a comfortable bed, for he is compelled to occupy it 24 hours a day.

The diet should consist of plain simple foods. One of the first things that the patient thinks about when he is informed that he has tuberculosis is fresh air, eggs and milk. They should be taught that open air, milk and eggs are not cures for tuberculosis but only aids when used properly. Milk and eggs do not cure tuberculosis. Give the patient three well balanced meals

each day and, if he is underweight, a glass of milk may be given about 9 a. m. and 3 p. m.

I make it a rule to have the patient keep a list of the foods he takes at each meal and carefully check this list on each visit. I find this method very satisfactory for you can then make suggestions as to what foods should be added to or eliminated from the diet. The main thing to be considered in the diet is to allow the required amount of nourishing food and do not stuff the patient. One common abuse in the home treatment of tuberculosis is overfeeding the patient. There is no more reason for over-feeding a tuberculous patient than there is for over-feeding people in general and surely no one would advise such a procedure. In the home the friends are apt to base their judgment of the efficiency of treatment almost wholly upon the weight that the patient gains. They point with great pride to a fat, flabby dyspneic patient, thinking that such a condition is favorable to a cure. The patient should be kept in good nutrition; but above all things else, he should not be made fat.

One of the important things is to give the patient the correct attitude. He must be made intelligent, he must understand something of the nature of tuberculosis and the principles of treatment. He should know that tuberculosis is a disease that will yield to treatment, but that its cure is exceedingly difficult and that this difficulty depends not wholly on the pathology of the disease, but partly on the inability to secure proper co-operation on the part of the patient for a sufficient length of time to permit the tuberculous tissues to be converted into scar. He should be told that although the symptoms may all be gone, the pathological changes are still not complete, and that it requires a much longer time to convert his tissues into scar and secure a permanent arrestment. So there will be no misunderstanding, I usually tell my patients that no matter if the physician should prescribe the best methods of treatment and the patient should co-operate to his fullest extent, there is a possibility that failure might result; but that such co-operation is the thing which is most conducive to success and it will often bring a hopeless case to a favorable termination.

A daily program should be devised. The patient should begin and end his day at definite hours. Regularity is essential to best results. In the sanatorium, if the patient has not slept he prepares for breakfast at the same time anyway. So should it be in the home. A patient can adjust himself to a regular routine and after a short time he will fall into it naturally. I tell my patients to arrange the hour for meals so that there is about five hours between them; thus, 7:00, 12:00 and 5:00. After breakfast the patient should be required to rest for one hour and then another rest hour before lunch and another say from one to two o'clock in the afternoon and observe another rest hour from four to five o'clock. And if the patient is having a daily rise of temperature, have him observe another quiet hour after supper. During these rest hours the patient should remain very quiet, no visitors allowed and he should not read during these periods. The patient should be ready for his night's rest at nine p. m. No excuse should be accepted for not retiring at the appointed time. After the patient is loafing about the house and later on taking his prescribed exercise these regulations as to time for meals and rest hours and time for retiring should be rigidly enforced. The patient must be instructed as to scattering infection. The family should also be instructed as to this danger. The patient should be provided with sputum cups and instructed how to change and use them. He should be told that all sputum and secretions from the mouth should be deposited in this cup. The infection is also scattered over the room by the patient

coughing or sneezing and to prevent this he should be instructed to use a paper napkin to cover mouth and nose when he sneezes or coughs, and immediately after using this napkin he should deposit it in a paper bag. Then two or three times a day, or as often as necessary, this paper bag containing the used napkins and the sputum cups should be burned. I do not approve of the patient using a cuspidor containing an antiseptic solution for the reason that patients and attendants will depend too much on the germicidal action of the antiseptic. The only safe thing to do is to burn these cups and napkins.

Children should not be permitted to stay in the room occupied by a tuberculous patient. The greatest contamination take place immediately surrounding the patient and children should be especially forbidden to play on the floor of the apartment occupied by the tuberculous patient. The child may be taken into the room provided it is not allowed to play on the floor, or on the bed and providing the patient does not play with it.

There should be an accurate record kept of the patient's temperature and pulse rate. This record should be kept by the attendant or nurse and not by the patient. I usually have my patient's temperature and pulse rate taken at 10 A. M. and 4 P. M., leaving the thermometer in the mouth for five minutes. I arrange the charts so as to keep one week's record and file them so that I can readily check the records over a several month's period in a few minutes. There should be absolute co-operation between the patient and the physician. The patient must have confidence in the doctor and the doctor must have confidence in the patient, otherwise satisfactory results will not be had. The best method of obtaining the confidence of the patient is absolute frankness in discussing his condition and his treatment, and on first examination make it thorough and impress upon the patient by this thorough examination the fact that you are familiar with tuberculosis and its treatment.

The most necessary thing in the treatment of tuberculosis in the home or in the sanatorium is rest, and tell the patient that all other measures will avail him nothing undess his rest is absolute and carried out over a considerable period of time. He must have rest of both mind and body. Therefore, all worries should be removed and his family and his friends should be told that no interference on their part will be permitted. Patients are frequently disturbed by neighbors and friends. Some will have a tendency to miminize his trouble and insist on him doing things which may entirely destroy his chances for recovery. The family very often become worried and despondent because improvement of the cast is not as rapid as they think it should be. This can be prevented by telling them in the beginning of the treatment that the patient will have good days and bad days, good weeks and bad weeks, and that it will require considerable time to restore the patient to his former health, and we must ask their thorough co-operation and patience.

The patient may express some dissatisfaction as to the length of time when he is informed that it may require two or three years to make him well again, but these worries can usually be minimized by telling the patient that "you are young or comparatively young as the case may be and according to the average life of man you are supposed to live 30 or 40 more years. What does it matter if you lose two or three years and then your health is restored and you can live comfortably with your family and be able to carry on and return to your full earning capacity. In a few years you will never miss the time."

The doctor should visit the patient as often as is necessary to produce the best

results and for the best result frequent visits are necessary. The patient must be seen often enough to keep his interest stimulated, and to give him the necessary aid for cure.

When we visit the patient we should point out all improvements and tell him that he is making a good fight, and not discourage him by pointing out the things which he has failed to do. Keep him cheerful, hopeful, happy, and assure him that his condition is satisfactory and that if he will keep up the fight, that in a few more months he will be improved to such an extent that he will be up going and able to mix and mingle with his friends and carry on as he did before he was a victim of tuberculosis.

DISCUSSION.

Dr. B. B. O'Mara (Sanatorium): It has been a pleasure to listen to this timely and instructive paper of Dr. Toomer. He has covered the ground so well that a discussion is not necessary.

I merely wish to emphasize some of the statements made by Dr. Toomer, the first of which is that an absolutely regular routine of life is necessary for the patient. First, and most important of all, when the diagnosis is made, is rest in bed. Put the patient in bed and keep him there the same as you would in the case of typhoid fever, only keep him there longer. Have a regular schedule for the patient to follow; a rest period before and after each meal. If more convenient in the home regulate the rest hours from eight to ten A. M., and one to three P. M., and after supper, especially if the patient is running a temperature.

It should be borne in mind that a mental rest is almost as important as a physical rest. A patient that is prone to worry is perhaps the hardest type of individual with tuberculosis to treat, and the worst results can be expected in that type of patient. It is essential, therefore, to remove all causes of worry in the home, financial, family affairs, and otherwise.

Next in importance to rest is the diet, and as Dr. Toomer has mentioned, a well regulated simple diet is all that is necessary. It should be served at regular hours each day. This diet should consist of vegetables, some meat, milk, two or three cooked eggs a day, no raw eggs whatsoever, fruits and sweets. There is no virtue in stuffing the patient. It will simply lead to an upset stomach or to an obese patient, and it will add more work for the heart to do. Fresh air is third in importance in the treatment and a well ventilated room will suffice for that. Follinger has stated sanatorium treatment offers about 25 to 50 per cent better results than the home treatment, and that is true. His percentage may be a little low; it may be greater than 25 to 50 per cent. I think perhaps it is, but as Dr. Toomer has mentioned, we have a number of these patients who can not have the advantages of sanatorium treatment,—a great majority of them can not and must depend on home treatment and their family physician. A combination between the two is essential, plus an optimism on the part of the patient that radiates hope, sunshine and good cheer if the cure is to be obtained.

Dr. May F. Jones (Laurel): I found I was on the program this afternoon for a discussion of Dr. Toomer's paper. I have listened with a great deal of interest to his paper, also to Dr. O'Mara's discussion of the paper.

There are one or two things I might say, especially since I left the sanatorium two years ago on account of ill health. The sanatorium treatment seems better in every way, but when we remember the number of patients we have in the state, and the few patients we can take in the sanatorium we must realize that very many, many patients have to be treated in their own homes.

I am afraid when I was in the sanatorium I had very little sympathy for the doctor back home, but I want to tell you since I have been out in private practice for myself, doing tuberculosis work entirely, I feel it is easy enough to control them in the sanatorium, but it is a very difficult thing to control them in their own homes. They do not have their regular rest hours even though the physicians do try to insist on it.

Another thing I want to mention here is I think we have a terrible problem in the treatment of the negro in the home, and I am afraid we doctors in this state and other southern states are not recognizing the importance of the negro in this problem. Only in the last few months I have examined three negroes and two of them are dead. All three of them had cures for more than a year, one of them two years, in a family of little children. I think our treatment should begin at the bottom instead of the top of the ladder. I think very few of the states have sanatoriums for the negro population. We have one, but it is only forty beds. If we can begin with our treatment of the negroes and eliminate

as far as we can their infection, we might hope, sooner or later, to get rid of tuberulosis in Mississippi.

Dr. Toomer (closing): I want to thank the parties who discussed the paper. I don't think there is anything else I care to add.

HYPERTENSION.*

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For many years hypertension has been the subject of much research and discussion, through which much knowledge has been gained, and great progress has been made in handling this universal devastating condition. It is now generally agreed, we believe, that hypertension is a sympton which, like fever, has no single etiology, and is a manifestation of some underlying disorder. Hypertension is one of the most intractable pathological conditions which the general practitioner is called upon to treat. It is rather remarkable that the clinical study of hypertension, a subject on which so much stress has been placed in recent years, should have had its inception only about fifty years ago with the first sphygmomanometer, and with the constant and intelligent use of this instrument, physicians have observed patients in increasing numbers who show hypertension, the causes of which are many and varied. High blood pressure has become a fashionable ailment, sometimes even an obscession, among the public, so that some people go about constantly speaking and, therefore, probably thinking continually of their "blood pressure," and ascribing to its evil influence, symptoms really due to other factors. Further, the mental worry induced by knowledge of the possible results of hypertension raises their blood pressure, and hence a vicious circle results, which demands treatment of the patient by sensible optimistic encouragement and otherwise.

In the consideration of the subject of hypertension, we have first to remember that blood pressure is extremely variable in many individuals. As a general rule, however, the diastolic will be found to be much more constant than the systolic, and probably of much more prognostic importance. Since the technic for taking the systolic measurements were described at a much earlier date than the diastolic, it has, until late, been the habit with the profession to be satisfied with the taking of the systolic alone. This is unfortunate, and to those who believe the diastolic to be of greater significance, it is rather disappointing to observe how often no mention whatever is made of the diastolic pressure.

The diastolic tension represents the peripheral resistance to the circulation and therefore, indirectly is an expression of the tonus of the arterioles. The systolic tension represents the diastolic resistance plus the force of the left ventricle to overcome the resistance. Therefore, in the absence of thyrotoxicosis or aortic valvular disease a liberal pulse pressure is desired. (McCloud).

The diagnosis of hypertension in borderline cases requires considerable judgment. A diagnosis of hypertension is considered justifiable if an individual under normal daily activity shows a prolonged tendency to a systolic blood pressure of 160 m. m. of mercury or over, and a distolic pressure of 90 or 95 m. m. or over. Some writers place the upper limit of normal systolic at 140 or 150 m. m. of mercury for men over 20 years of age and a limit somewhat lower than this for women. (Palmer).

Clinical evidences, however, are convincing that a certain degree of advanced blood pressure cannot in all cases have the same significance with respect to life duration, for the reason that temporary rises in

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blood pressure occur as a result of various temporary factors such as excitement, fatigue, and as seen in cases of so called "high-strung individuals." We believe, however, that the higher diastolic pressure is less influenced by these factors, and when found is very significant, and when the diastolic pressure is found to have a constant reading of 90 to 100 m. m. of mercury, that hypertension is present, regardless of whether the systolic is 140 or 160.

PROBABLE ETIOLOGY AND TYPES.

As stated above hypertension has no single etiology, but numerous types have been recognized and the direct cause in some of these types has been definitely established. Other types are still undergoing clinical study and research workers are as yet unable to agree as to the causes. The etiology in some of these may be understood by listing the recognized types.

1. The hypertension associated with congenital stenosis of the isthmus of the aorta.

2. That arising from arterio-venous aneurysm, which often disappears when abnormal connection between the artery and vein is corrected.

3. The endocrine types: (a) The hypertension that occurs in hyperthyroidism, which often disappears with the removal of a portion of the over-active thyroid gland. (b) The paroxysmal hypertension associated with tumors of the suprarenal gland in which after removal of the tumor, the blood pressure usually returns to normal and remains so. (c) Hypertension of the menopause, brought about by the lack of ovarian secretion, with a relative oversecretion of the adrenal and pituitary glands. This type is fairly easily recognized when we consider the age of the woman with the usual menopausal symptoms, as hot flushes, sweating, nervousness, palpitation, tachycardia, and change in the menstruation. Nillson classes this type with essential hypertension, and states that when it continues for a period of years uncontrolled, developes into an organic condition with diseased heart, blood vessels and kidneys.

4. The infectious and toxic types includes the hypertension associated with any chronic foci of infection in the teeth, tonsils, accessory nasal sinuces, gall bladder, appendix and prostate and with intestinal intoxication. Yet some observers claim that foci of infection lowers the blood pressure because the general resistance and vitality has been lowered by such infection. Yet most of us, no doubt, have often seen the blood pressure fall to normal after removal of such infection. Likewise have we seen the blood pressure return to, or almost to normal, after active detoxicating treatment of patients, who upon first examination present a blood pressure of 200 or 210 systolic and 110 or 120 diastolic, intensely toxic, with heart not enlarged, vessels in fair condition, urine normal, pulse rate normal or practically normal, tongue covered with a heavy thick coating, headache and marked giddiness, anxious expression and posibly some mental confusion.

5. Sclerosis of the arterioles of the medulla. Cushing in 1901 drew the conclusion from experimental work that an anemia of the vasomoter center in the medulla caused a systemic hypertension. Anrep and Starling and Starling found that vascular lesions in the medulla which impaired the blood supply can produce a rise in the systemic pressure.

6. Heredity: Certain individuals present certain susceptibilities in their vascular responces, which are transmitted by inheritance. O'Hare in a series of cases, found a family history of vascular disease in 68 percent. Ohler stresses heredity and environment as prominant factors in hypertension, and finds that such is displayed early in life by flushing of the skin, cold, moist, cyanotic extremities,

fainting and dizzy spells, opistoxis and increased menstrual flow. There are many reports in the literature of several members of the same family having had hypertensive disease. Rosenblom reports ten or twelve members of one family having had high blood pressure. Cadbury, in a very extensive practice among Chinese students, states that he has rarely seen hypertension, either with or without nephritis. This is probably due to the simplicity of their life, and lack of nervous strain. O'Hare further states that in families in which there is a strong element of vascular disease, the parents should be told of the part played by heredity and should be urged to guide their children along the less strenuous walks of life and to advise them against excessive mental and physical exertion, excessive ambition, and obesity. This applies particularly to those children who show vascular instability and hemorrhagic tendencies early in life. He also states that this disease could be almost eradicated if the marriage of the children in vascular families could be prevented.

7. Renal Theory: Most cases of hypertension do not show evidence of serious renal disease and the patients often die from cardiac failure, apoplexy, or other causes. However, renal involvement may occur. The acute and chronic nephroses are of special interest because they usually do not show hypertension. In spite of the severity of the syndrome of malignant hypertension, renal impairment may be difficult to determine and usually develops only in the terminal stages. Profound changes, however, are present in the kidneys which are due to severe vascular injury, as the chronic glomerular nephritis and the arterioscleratic kidney, both of which are attended by hypertension. The acute glomerulonephritis of pregnancy, that is associated with a marked hypertension, toxemia and retinitis, is often seen in a woman with her first pregnancy, and after delivery the blood pressure drops to normal and remains so, and two or three years later a normal pregnancy occurs without any rise of blood pressure. Other women of like circumstances develop chronic vascular disease. The vascular disease may have present before pregnancy, but after it became severe the blood pressure remained high and the condition in the arteries gradually became more marked. This would indicate that in a certain group of cases of eclampsia in which the vascular condition progresses the lesion may be vascular rather than renal.

8. Essential hypertension: McCloud states that the mere fact that the disease has been named essential hypertension, is evidence that the cause is unknown. He further says that it is now generally recognized as a definite clinically entity, being more clearly differentiated from other diseases in which abnormally high blood pressure is a symptom, and gives the most likely factors in producing it as: (1) heredity; (2) discordant social and business life; (3) mental and emotional strain; (4) infections and toxic conditions. Granger says: "I rather prefer to consider it more or less as a clinically entity, feeling that it is entitled to such consideration in the same light as several other diseases falling in the same category," and cites the following probable causes: (1) sclerosis of the medulla; (2) vascular neurosis and hyperirritability of the nervous system; (3) heredity and vascular neurosis; (4) endocrine disturbances; (5) vascular changes in the kidney; (6) obesity and infection.

The essential hypertension must be differentiated however, from the high blood pressure of other types that is merely transitory. It is extremely common and comprises a large percent of the hypertensive patients that we treat today, and carries a chain of progressive symptoms from the early stage of increased tonus or spasticity of smooth muscle of the mesial

layer of the arterioles, to the late or far advanced arteriolosclerosis with the replacement of the exhausted muscular layer of the arterioles by fibrous tissue. In many cases it continues for years, even beyond the normal expectancy of life, and finally death occurs from some intercurrent disease. Others pursue a rather rapid course and seems to be extremely susceptible to cerebral and cardiac accidents. These accidents are averted only so long as the myocardium and cerebral vessels can withstand the strain of the continued high diastolic presure.

Adams and Brown gives the following classification of essential hypertension; (1) mild benign; (2) severe benign; (3) malignant.

Mild benign; Diastolic pressure under 116 m. m.; no demonstrable impairment of function of heart, kidneys or brain; mild degree of vaso-constriction; arteriosclerosis of the retinal arteries; no hemorrhages or exudates in the fundi; moderate changes in the peripheral vessels; prognosis usually good.

Severe benign: Diastolic pressure usually above 115 m. m.; symptoms and signs indicating impairment of function of heart, kidney and brain; hemorrhages and exudates and marked vascular changes in the retinal vessels; well defined changes in the peripheral vessels; prognosis usually bad, depending on the degree of vascular degeneration of the essential organs.

Malignant; Diastolic pressure usually above 130 m. m. frequently above 150 m. m.; signs and symptoms indicating marked impairment of function of heart, kidneys or brain; changes in the fundus as, edema of the discs; marked vascular changes, hemorrhages and exudates; marked changes in the peripheral vessels; prognosis, average life less than two years.

SYMPTOMS.

The variety of symptoms of hypertension is one of the characteristics of the disease. Some patients give no subjective symptoms whatever until the hypertension has advanced to the extent that cardiac failure supervenes. Others complain of shortness of breath on exertion and severe headaches. The headache is usually of two types; one is the true dull headache; the other is an acute lancinating pain, the head feeling as if it were about to burst and when associated with dizziness is often a warning of approaching cerebral hemorrhage or thrombosis.

Palpitation, tachycardia, and inability to lie on the left side are often complained of. The palpitation should receive close consideration for it is a symptom found in many nervous disorders, and the possibility of organic disease may be overlooked.

Giddiness or dizziness is a symptom often produced by stooping or coughing and may be most persistent and is usually associated with well marked general arteriosclerosis. Sudden attacks of definite vertigo if associated with vomiting, are usually of serious import.

Noises in the ears are of two kinds, one is the low pitched pulsation and responds very well to treatment; the other consists of various whistling, hissing, high pitched sounds and is present when arterio-sclerosis exists, and of course, does not respond to treatment.

Anginal pain is not uncommon, especially late in the disease, but the earlier symptoms as, substernal tension or pressure, produced by exercise, and relieved by rest, if given early recognition and treatment, will often delay for many years the onset of a fatal seizure.

The mental symptoms vary from nervousness, irritation and excitement to the very rare symptom of acute mania. The robust in the first few years of the disease often manifests unusual mental vigor, but with the onset of arterio-sclerosis, drowsiness, especially in the middle of the day,

often develops with failing memory, especially for recent events, and advances in relation to structural changes of the cerebral vessels.

Hemorrhages, usually retinal and nasal, are of common occurrence and often gives rise to great anxiety. The retinal hemorrhages often leave permanent impairment of vision. The nose bleeding is often alarming and difficult to control, yet it is often a blessing, possibly averting a cerebral catastrophe. Pains in the limbs are often complained of, and clutching sensations in the throat are a common symptom.

PHYSICAL SIGNS.

Early physical examination usually reveals very little more than an increase in the blood pressure. Before hypertrophy of the left ventricle is recognizable, possibly the most constant cordiac sign is the accentuation of the aortic second sound. The early changes in the peripheral vessels are usually noted earlier in the thin sallow individual than in the plethoric sufferer. Douthwait calls attention to the fact that when the radial artery appears to be normal to the examining finger, the brachial is often grossly abnormal, and that the sensation imparted is that of a leathery toughness, rather than the hard pipe-stem condition common in senility. The retina should be examined in every case for here may be found arterial disease long before it is apparent elsewhere.

TREATMENT.

The treatment of high blood pressure should never begin until we have exhausted every means of diagnosis that we have at our disposal in an effort to determine the underlying cause. No regular routine treatment can be outlined; each case should be considered in relation to type, the severity of symptoms and the physical signs present. In uncomplicated hypertension we should, therefore, direct our treatment along such lines as to prevent or prolong complications that are just as sure to follow the progressive uncontrolled types as the night follows the day, and in doing this we are giving relief to many of the troublesome symptoms that would otherwise allow the patient to become a complete invalid. We should acquaint ourselves thoroughly with the patient, his mode of living, as to ambition, mental and physical effort in the performance of his daily duties, and instruct him in a manner that he may learn to relax. Night work should be avoided, if possible, and he should have eight or ten hours undisturbed sleep and rest at night. A mid-day rest of one or two hours, preferably after the noon meal, is especially good. Week end rests in bed should be encouraged as often as required, depending upon symptoms and stage of development. One or two weeks hospital rest every few months in the advanced stage is often very beneficial. The excessive use of tobacco and alcohol is contraindicated. The bowels should be kept open, one or two soft eliminations each day is sufficient. Excessive drastic elimination, not only is of no special benefit, but often harmful.

Diet: The selection of a diet is far less important than previously thought, and should be principally fruits, carbohydrates and vegetables. Meats in moderation are permissible two or three times a week, and the patient should be instructed to eat slowly, and always stop before the appetite is completely satisfied. Salt is permissible in food but none should be added at the table. If there is a renal or cardiac complication, then it should be used very sparingly.

Drugs: It is very doubtful as to the amount of real benefit derived from medicinal treatment until complications arise that demand specific medication. Here we are impressed with the statement of Dr. Walter A. Bastedo, in the introduction of his Materia Medica, "Medicine sometimes cures, it often relieves, and always consoles." Yet we must guard our treatment carefully lest we forget the warning of

the late Dr. W. H. Dickinson, that, "the great danger of chronic nephritis is that someone will find it out an try to treat it."

We have found good results in a fair number of essential hypertensives with the sulphocyanates, but these should be used cautiously if there is cardiac or renal disease. If cardiac or renal disease is present, we often fine great relief by the use of monopotassium diacetyl citrate (di-cituri-n). It is not a renal irritant; does not depress the heart's action or the nervous system, and when albumin or casts are present, we usually see a notable decrease or entire disappearance. The iodides are indicated only when we find a positive blood Wasserman. The nitrites are useful in cases associated with anginal pains. When cardiac failure threatens digitalis is indispensible. Mistletoe is said to be very effective in relieving the severe headaches and dizziness of hypertension. The bromides and luminal are effective in quieting the nervous system. In acute alarming cardiac or cerebral symptoms, venesection or lumbar puncture is indicated. Diathermy is recommended by some and appears to be gaining popularity among those who have given it a thorough try-out. Liver extract within the next few years will probably be one of our most popular remedies.

No hard and fast rule can be set for the treatment of hypertension, but each case must be considered in relation to type, symptoms and physical signs, and when such consideration has been given to every case that presents itself for treatment, great relief will come to our patients and life will be made happier for the hypertensive.

DISCUSSION.

Dr. W. C. Chaney (Memphis, Tennessee): Dr. Beach asked me to discuss hypertension from the standpoint of involvement of the heart. Before I start, I want to say one thing, that due to the enormous amount of literature that has been written on hypertension, and the fight that has been going on between certain groups as to the treatment and everything else pertaining to hypertension, until, at the present time,, I don't know of any subject more difficult to handle—let's say two subjects, in the field of medicine—than angina pectoris and hypertension.

I want to congratulate Dr. Beach on the able way in which he has discussed this subject.

The number of deaths in the United States due to heart failure associated with hypertension is estimated at 70,000 per year, while about 70,-000 more die from other complications of high blood pressure.

The form of heart disease so frequently associated with hypertension is usually discussed under the headings of chronic myocarditis, hypertensive heart disease, chronic myocardial disease, senile heart cardiac hypertrophy, and dilatation.

Cabot was responsible for the term "hypertensive heart disease," but, unfortunately, as soon as we thought it was settled that hypertension entirely explained this type of cardiac condition, Christian and others presented for our consideration very logical arguments that there must be some other fact or factors associated with hypertension to bring about this condition. To quote Christian: "I do not feel at all sure that in patients with hypertension, the hypertension is the ultimate cause of the cardiac hypertrophy and dilatation and eventual cardiac failure." The term "hypertensive heart disease" would, therefore, seem unsuited to this variety of cardiac affection. Likewise, the name "chronic myocarditis" appears inappropriate, since careful pathologic study does not reveal any inflammatory process. Until more is known about this type of heart failure, I think the term suggested by Christian, "chronic myocardial disease," is most suitable.

Signs of cardiac failure appearing after the age of forty are very suggestive of chronic myocardial disease. Perhaps the most common complaint of these patients is dyspnoea. Other very important symptoms are attacks of paroxysmal dyspnoea, precordial pain of an indefinite nature or due definitely to angina pectoris, and attacks of palpitation.

Contrary to general opinion, the treatment of chronic myocardial disease is, in the majority of cases, very satisfactory. The physician can, by conscientious effort, add many years of comparatively good health to the lives of these patients.

Favorable prognosis, however, must be given only after very careful study of each individual case. The physician who has had broad experience with this disease knows that there are a

few signs and symptoms which, when found, mean that the patient will live, at most, only a few years. These are:

1. Certain electrocardiographic findings;
2. Certain retinal changes;
3. Pulsus alternans;
4. The appearance of a gallop rhythm;
5. A diastolic blood pressure over 130 m.m.
6. Evidence of damage to the brain or kidneys.
7. Cardiac asthma.

Briefly, the complications of chronic myocardial disease are:

1. Congestive heart failure;
2. Apoplexy;
3. Angina pectoris or coronary thrombosis;
4. Nephritis with uremia.

The most important points in the treatment of hypertension are:

1. Be careful not to develop in the patient an anxiety neurosis;

2. Impress upon the patient the necessity of avoiding stress and strain. Tell him that the treatment must be carried out over a period of years, and not weeks.

3. Make the patient get plenty of rest. Divide his day into two parts by a mid-day rest.

Dr. T. E. Wilson, Jr. (Jackson): I feel that the latest advance that has been made in the study of cardio-vascular disorders is the recognition of hypertension as being a symptom rather than a definite clinical finding.

Much can be done for people with hypertension if the condition is recognized early; little can be done if it is recognized late.

Just when to call blood pressure hypertensive and when normal is debatable. Dr. Palmer, who worked with a group of Harvard students over a rather long period of time, and studied these records over a long number of years, has said a figure of 140 to 150 is definitely hypertensive in early youth. These people are more apt to become hypertensive ten years later.

Hypertension, of course, produces heart disease, and heart disease also produces hypertension. It is difficult to determine cause and effect in these cases. Every one of these people should have a thorough clinical investigation,—I agree with Dr. Beach on that,—before an attempted treatment is begun, because most of the cases, I feel sure are due to foci of infection or else due to glandular disturbances,—disturbances of the glands of internal secretions. After these foci of infection are located, with systematic treatment, most of these people will respond very satisfactorily indeed.

Dr. P. W. Rowland (University): I very much enjoyed the doctor's good paper. I am very much interested in the subject of hypertension.

The hypertension of senescence is to my mind, purely compensatory. Nothing much can be done for these cases. They generally die of acute infections of some sort, gastrointestinal or pulmonary. I am, therefore, particularly interested in the hypertension of the young.

Fifteen or twenty years ago I began the systematic physical examination of students at the University, and I found a considerable number of those young fellows with a hypertension of 150 to 210. Careful and repeated examinations in every instance failed to reveal any distinct evidence of organic disease. I do not know of a single one of those boys who is alive today. You lost one of them here in the city of Jackson, Dr. Basinger, who died with cerebral hemorrhage. This experience has led me to be rather pessimistic as to the outcome in this class of cases, so much so that I am inclined to believe that a young fellow with a hypertension, as I have indicated, can expect to live not more than ten or fifteen years. We must study the cardio-vascular and renal systems in the young, if we are ever to learn the real cause of hypertension in the middle aged.

I want to make a particular point in the treatment of these cases. Grant that we have drugs that will lower blood pressure, may it not be probable that we are doing harm rather than good? I look upon the hypertensive individual as somewhat analogous to the person with high temperature from an acute infection. In the case of acute infection the temperature regulating mechanism is set to a higher point than normal, and is prone to oscillate around a certain point, and when below that point for any length of time, the patient loses vitality, resistance, and is not so likely to recover. So with hypertension: the cardio-vascular tone is raised to compensate for increased resistance, and when the tension is lowered, by the use of drugs particularly, loss of vitality follows. I find that a great many doctors are now using sodium sulfocyanate in their practice. We tested out this drug in our laboratory on four dogs, weighing each approximately fifteen kilograms. As much as twenty-two grains, given intravenously to each of the dogs, failed to reduce the blood pressure; in fact, in two of the dogs it was raised. No change in pulse rate

was noted. In your bypertensive cases you are using one and a half grains three times a day. I believe that the drug treatment of this condition is ineffective, and often harmful. Cut down work and diet, and live the simple life.

Dr. T. R. Beach (closing): I want to thank the gentlemen for the discussion of the paper, especially Dr. Chaney, from Memphis.

I want to say just one word about the discussion of Dr. Rowland. It would be interesting to know just how many of those young school boys he spoke of as having hypertension in their teens or early twenties,—in just how many of them this hypertension was due to renal involvement. I think probably a big percentage of the hypertension in the younger individuals is due to renal involvement, and if those young people were watched through their lives and a careful check made of their urine, I believe you would find a large percentage of the cases in young boys and girls is due to renal disease.

LOBAR PNEUMONIA AND ITS TREATMENT.*

E. L. WALKER, M. D.,

MAGEE, MISS.

Pneumonia is a constitutional malady producing an acute infectious inflammation, involving the vesicular structure of the lungs.

Synonyms: Croupous pneumonia, pneumonitis, fibrinous pneumonia and lung fever.

ETIOLOGY.

The Exciting Cause.—Lobar pneumonia is due in a large majority of instances to the pneumococcus. Other bacteria may occasionally act as the exciting cause, but such are exceptional. Perhaps the most important of recent contributions to our knowledge of pneumonia is that of Dochez and Gillespie, who showed that pneumococci could be divided into four "types" based upon well defined immunological differences. In a series of 720 cases of lobar pneumonia studied at the Rockefeller Hospital, pneumococcus Type I infections were the most frequent, comprising 34 per cent of all the cases. About 33 per cent fell into the Type II group and 10.8 per cent in the Type III group; 22 per cent were Type IV infections. In the series of 1082 cases of lobar pneumonia studied by the writer in the wards of Bellevue Hospital, 993 cases received careful bacteriological study; 911 of these, or 91.8 per cent, showed pneumococci in the sputum or other body fluids. Streptococcus hemolyticus was found in 53 cases and streptococcus viridans in 21 cases, and there was one case in which the bacillus influenzae was isolated in pure culture. Four cases were caused by the Friedlander bacillus. In one case staphyloccus aureus appeared to be the exciting cause.

In 911 cases of pneumococcus pneumonia in Bellevue Hospital the various types of pneumococci were represented as follows:

		Number of Cases	Incidence Per cent
Pneumococcus	Type I	346	38.0
	Type II	165	18.1
	Type III	137	15.0
	Type IV	263	28.9

The incidence rates for the various types admitted to Bellevue Hospital differ somewhat from the Rockefeller Hospital figures. If the Rockefeller Hospital series and the Bellevue Hospital series are combined we have the following:

		Number of Cases	Incidence Per cent
	Type IV	422	25.9
Pneumococcus	Type I	592	36.5
	Type II	402	24.6
	Type III	215	13.2

The incidence of the types varies considerably from year to year. During epidemics of influenza there is a marked increase in the incidence of pneumococcus Type IV infections.

EPIDEMIOLOGY.

Generally speaking, lobar pneumonia is an endemic disease; it may take on epidemic form, however, under certain cir-

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cumstances. It has long been known that many healthy individuals are pneumococcus carriers and, reasoning from this, it was formerly assumed that most cases of lobar pneumonia were autogenous infections. During the past few years, however, important studies on the epidemiology of pneumonia have been carried out at the hospital of the Rockefeller Institute. In these studies cultures were made from a large number of healthy mouths in order to determine the relative incidence of the various types of pneumococcus.

In a study of 299 individuals the relative incidence of the four types were as follows:

	Cases showing Pneumococci	Incidence Per cent
Pneumococcus Type I	1	0.8
Type II	0	0.0
Type II (atypical)	22	18.9
Type III	34	28.1
Type IV	64	52.9
Cases showing no pneumococci	178	
Total	299	

From these figures it is clear that pneumococcus Type I and Type II are practically never discovered in the buccal secretions of healthy individuals. On the other hand, pneumococcus Type II (atypical), Type III, and Type IV are frequently found in the healthy throat.

When it is recalled pneumococcus Type I and Type II cause approximately 60 per cent of all lobar pneumonia, it is fair to conclude that pneumonia due to these types is not an autogenous infection, but follows invasion by these organisms from without. On the other hand, it is probable that a considerable proportion of the pneumonia caused by pneumococcus Type III and Type IV is traceable to organisms which the patient has been carrying for some time in his mouth.

During convalesence it is only in exceptional cases that the same type of pneumococcus with which the individual is afflicted during the disease persists in the mouth for any considerable time after recovery. Usually the infecting organism disappears in from three to four weeks after the illness. After it disappears, either no pneumoccoci are present at all, or the infecting type has been replaced by one of the types usually found in the normal throat. These observations afford still further evidence that infection in pneumonia, particularly in Type I and Type II cases, occurs from without.

PNEUMOCOCCUS CARRIERS.

Carriers of virulent pneumococci probably play an important part in the dissemination of the disease. The Rockefeller Institute workers showed that a considerable percentage of persons intimately associated with patients suffering from pneumonia harbor in their mouths pneumococci of the same type as those in the patients. Whereas it was shown that in a large series of healthy individuals who had come in contact with cases of lobar pneumonia, 13 per cent were pneumococcus Type I carriers, and 12 per cent pneumococcus Type II carries. It was also shown that the pneumococcus is more frequently present in the throats of persons who have had pneumonia than in those of individuals never attacked by the disease; and that the type of pneumococcus found in the throat corresponds to the type of pneumococcus previously isolated from the patient.

FACTORS PREDISPOSING OF PNEUMONIA.

Age: The most marked susceptibility to pneumonia occurs at the beginning and toward the end of life. Young children are more susceptible than older ones. The susceptibility increases gradually during adult life, becoming greatest in old age. The United States Census report shows, however, that 51.2 per cent of all deaths from pneumonia occur between the ages of 20 and 65, indicating that pneumonia also takes a heavy toll of human life during the years of greatest activity. The economic

significance of this fact should not be overlooked.

It is interesting to note the relation of age to the incidence of pneumococcus type. In the Bellevue Hospital series Type I infections, by far the commonest type encountered in young people, comprise 50.7 per cent of all cases that occur between the ages of ten and twenty years, 44 per cent of all cases between the ages of twenty and thirty years, and 42.5 per cent of all cases between the ages of thirty and forty years. During the later decades Type I infections become progressively less common: constituting only 20.6 per cent in cases over sixty years of age.

In a series of 329 Type I pneumonias studied in Bellevue Hospital, 88.7 per cent occurred in patients under fifty; only 11.2 per cent occurred in patients over fifty. On the other hand, Type III infections are rare in young people, but common in middle aged and elderly people. In patients under thirty years, less than 7 per cent showed Type III infections; while in patients over sixty 41.2 per cent were referable to pneumococcus Type III.

In contrast to these variations in the incidence pneumococcus. Type I and Type III infections, the incidence of Type II and Type IV pneumonia was very little affected by age.

Sex. Men are more frequently affected than women, probably because they are more exposed to the weather. The incidence of Type I and Type II pneumonia is distinctly higher in males than in females, while women appear to be particularly susceptible to Type III pneumonia. In the Bellevue Hospital series the incidence of Type III pneumonia was three times as great for women as men. The incidence of Type IV pneumonia is also higher in women than in men. The difference in type incidence for the sexes can probably be explained by the fact that men are more exposed to the virulent types than women; the latter when they do contract pneumonia, are more frequently infected with the types found in the healthy mouth.

Race: Negroes are distinctly more susceptible to pneumonia than the white races. This was well demonstrated during the World War when the negro troops suffered much more than the whites from pneumococcus infections. This, however, is disputed by many writers.

Occupations and Mode of Life: Pneumonia, like tuberculosis, is most common the poor and badly nourished. Individuals who are exposed to hardships and inclement weather are particularly liable to the disease. In the Bellevue Hospital series day laborers and sailors were the two largest groups of wage earners represented. Pneumonia is more common in the cities than in the rural districts. This is probably due, however, not so much to the actual living in the cities as to the existence of the slum conditions in the centers of large population.

Personal Condition. Fatigue is one of the most important predisposing factors, especially when chilling of the body takes place after profuse perspiration. Hunger is another important factor. Debility and emaciation render individuals more susceptible to the pneumococcus. In our large cities alcoholism is responsible for a great many cases.

Weather. Sudden drops in temperature predispose to pneumonia and expose to cold of any kind is undoubtedly an important factor. As previously pointed out, the combination of cold and dampness, such as occurs in the early spring, affords the condition most favorable to contracting the disease.

Previous Attacks. Pneumonia shows a very definite tendency to recur in some individuals. The patient's immunity against the pneumococcus is high immediately after

the attack, but apparently it does not persist for more than a year.

TYPE OF INFECTION.

The investigation of Cole at the Rockefeller Institute first showed the relation of pneumococcus type to the death rate in lobar pneumonia. Cole's figures for the four types are as follows:

	Per cent
Pneumococcus Type I	25-30
Type II	25-30
Type III	45-50
Type IV	15-20

In the Bellevue series the death rates for types differed somewhat from the figures of Cole:

	Cases	Deaths	Death Rate
Pneumococcus Type I	175	41	23.4
Type II	76	31	40.7
Type III	60	24	40.0
Type IV	136	31	22.8

The high death rate in Type III pneumonia can be explained in part by the fact that this infection occurs mostly in middle age and elderly people. In the Bellevue series the death rate for pneumococcus Type III in patients under thirty years of age was only slightly higher than that for the other types.

TREATMENT.

The serum treatment in properly typed cases is meeting with good results in hospital practice. It is well to note, however, the different reactions in administering serum:

(1) The true anaphylactic reaction; (2) the thermal reaction (3) serum sickness.

1. The Anaphylactic Reaction. When individuals are highly sensitive to horse serum, symptoms of anaphylatic shock may appear fifteen to twenty minutes after the introduction of serum. The patient suddenly becomes dyspenic; there is flushing of the face and asthmatic breathing, followed by sweating, urticaria, and general anxiety. The symptoms can usually be relieved by the prompt hypodermic injection of 0.5 c.c. of adrenal in 1:1000 solution. Shocks of this kind occasionally end fatally, but this occurs only in cases where precautions have not been taken. If patients sensitive to horse-serum are properly desensitized symptoms of anaphylactic shock will either be absent entirely or appear only in a mild form.

2. Thermal Reaction. Sometimes the injection of antipneumococcus serum is followed by a "foreign protein" reaction, which is quite different in character from the anaphylactic reaction. Thirty or forty minutes after the injection of the serum the patient has a chill, which is followed by a rapid rise in temperature. The temperature remains high for several hours; then there is a rapid drop, accompanied by profuse perspiration. This type of reaction is comparatively rare after the injection of Type I serum.

3. Serum Sickness. This occurs in about 75 per cent of all patients who receive antipneumococcus serum. The severity of serum sickness depends in part on the amount of serum administered. Symptoms usually appear seven to fourteen days after the injection of serum, though they may come earlier. The patient breaks out in a profuse urticaria, the temperature rises to 101 or 102, and often there is pain and swelling in various joints. These symptoms persist for a few days and then disappear.

Treatment with Solution of Pneumococcus Antibodies. According to Cecil, Larson and Conner the best results have been in Type I cases. It has little if any effect on the Type II cases. This line of investigation is still in progress and affords a method of providing the patient with protective substances in a highly concentrated and purified form.

Pneumococcus vaccine has been recommended as a therapeutic measure, but there is very little experimental or clinical evidence in its favor. The immune response to pneumococcus vaccine is comparatively

slow. Even when the vaccine is injected intravenously, antibodies do not appear in the blood until a week or ten days later. The striking effect sometimes observed after the intravenous injection of pneumococcus vaccine is probably non-specific in character.

Chemotheraphy in various forms has been tried in the treatment of lobar pneumonia. When treatment is instituted, be guided by the fact that you are not to treat pneumonia but a patient with pneumonia. Solis-Cohen and others have advocated the use of optochinbase and have reported favorably on its therapeutic value in the treatment of lobar pneumonia, while others have reported not so favorably.

It is well in the beginning, wherein the tongue is coated and the gastrointestinal canal is deranged, to give a mild purgative. Temperature, cought, dyspnea and pain, restlessness and insomnia are to be controlled by appropriate methods, care being taken to safeguard the stomach and bowels. For the temperature, if around one hundred and four or above, the use of ice bags and, in selected cases, an occasional antipyrectic are of value; for cough if too severe, small doses of either paregoric or Dovers powders act well; for dyspnea and pain, counter irritations to the chest and morphine hypodematically answer well in many instances. Some advise the use of oxygen but too much should not be expected from this remedy, as there is some additional factor besides the mechanical one of consolidation of the lungs producing the dyspnea, for the consolidation is just as marked immediately after the crisis, while the dyspnea is wonderfully relieved. Someone has said "fresh air bears about the same relation to canned oxygen that good porter house steak does to embalmed beef."

Restlessness and insomnia is best controlled by sulphonal, trional sodium amytal, sodium bromide, and some times by the combination of strychnine with trional. Whiskey, judiciously given, often relieves cough, dyspnea, restlessness and if pushed produces sleep.

Frequent examinations should be made of chest, blood pressure and urine. By doing this we often detect complications in their incipiency, the most frequent complication being that of the heart.

In the aged, feeble or those accustomed to the use of alcohol a stimulant should be given for the onset and I know of no better stimulant than whiskey.

Other indications calling for stimulants are frequent, feeble, intermittent or irregular pulse. Delirium and muscular tremor immediately following crisis and the period of collapse can often times be successfully handled by the use of hypodermoclysis of normal saline solution and camphorated oil hypodermatically. Whisky, strychnine and hot applications to the chest and extremities stimulate circulation and aid materially in the recovery from shock. A few hours of honest to God work on the part of the doctor and nurse will often times save a life, where on the other hand if we depend on some drug to act our patient will die.

It is well again to mention frequent examinations of the chest as the heart is responsible for more deaths in pneumonia than all other organs combined. If it is detected that the heart muscle is failing, I know of no drug that acts quite so well as digitalis in large doses. We often find that in many cases of pneumonia digitalis fails to influence the heart, this is very likely due to a high body temperature producing a partial paralysis of the vagus center and endings in the heart.

Until more is known about the specific treatment of pneumonia we must rely on such remedies that we know will act in a given length of time upon certain organs that require stimulation or depression, as the case may be, until nature can come back sufficiently strong to handle the situation.

During convalescence the diet should be highly nutritious, stimulating tonics should be administered and if consolidation shows any tendency to linger, iodides should be given internally.

SUMMARY.

A knowledge of your patient.
Frequent examinations.
Plenty of fresh air.
Plenty of water.
A nutritious, easily digestible diet.
Well selected drugs.
A good nurse.
A conscientious doctor.

DISCUSSION.

Dr. G. W. F. Rembert (Jackson): I shall try to discuss the treatment of lobar pneumonia. The doctor has set forth the etiology very splendidly and I shall confine my remarks to treatment.

In treatment consideration goes first to those agencies which are most likely to take care of the cardio-respiratory conditions, and thence to chemicals that might have a definite destructive effect on the pneumococcus, and then the matter of serum.

The doctor brought out that unquestionably the matter of rest is of the utmost importance in the treatment of pneumonia. A patient with lobar pneumonia should be kept flat on his back, and Moss and Howard report a case of the sudden death of a patient who was raised so his physician might better listen to the heart and lungs. Plenty of fresh air, a diet that is nutritious and easily assimilated, containing the dominant carbohydrates, seeing that the patient gets three to four liters of fresh water a day will usually take care of the situation with the addition of general relaxers, such as codein preferably, morphine very sparingly. So far as those objects, chemicals, probably mercurochrome or optamagin may possibly have some value. There is no question about it. Mercurochrome has been set aside by many, I think, as probably not having much value.

Then comes the question of the general cardio-respiratory stimulants and in that it becomes a matter of digitalis, and I think there is getting to be more of an opinion that digitalis is not advisable from the very beginning but should be reserved for those cases showing a cardiac involvement. We think now death is probably due more to respiratory rather than cardiac conditions. Many men question the advisability of starting digitalis in the very beginning. The use of glucose is favored by most men. The matter of the use of oxygen is to be considered. Where necessary give three to five liters of oxygen.

Then we step to the matter of serums. I am sorry that I do not have time to go into that.

Dr. Randolph Lyons (New Orleans): I would like to discuss for just a minute the problem of pneumonia as seen, for instance, in the East. For example, in the South, two years ago there was a pneumonia commission instituted to investigate isolation and hospitalization of pneumonia patients and the facilities for so doing throughout the country, and it seemed in the East, particularly in New York, Boston, Baltimore, Philadelphia, it is necessary to have a large number of wards, sometimes a whole wing, in which to house these patients and isolate them. They wrote down to New Orleans for us to investigate the same situation, and I was on the committee to investigate that situation at Touro Infirmary, and we found we had no such problem. We didn't have enough cases of true lobar pneumonia to fill half a dozen beds at one time. The same thing was true at the Charity Hospital. It seems that the problems are not exactly alike. We are more fortunate in the South, it would seem, than they are in the East.

Another point that came up was this: All the statistics we have heard have come from the North and East, from New York and Boston chiefly. They have found various types. How many of us have had typing done in a sufficiently large number to know whether we have the same types as they have in New York?

When I was in Bellevue a few years ago they had comparatively few Type IV. cases. Taking all the other cases. Type IV would be about one-third. In the investigation of that subject at the Charity Hospital, we found our highest group was the Type IV. Now, Type IV, fortunately, is less virulent than the other types, so I think the question we all have to realize is we have a little different problem to deal with than they have in the East, and we will have to get up our own statistics.

The next point I would like to bring out is the treatment. If we are dealing here more frequently with Type IV, we haven't got quite the same use for these serums as they have, for instance, in the North. I see relatively few Type I cases. In those I have seen I have used Type I serum with pretty good success, but in most of those cases, before I gave the serum, I made a note I thought they would get well anyway. I don't know whether the serum did it or not.

When it comes to mixed types, Types I, II, and III, I think probably the best agent we have so far as the pneumococcus antibodies. So, if you have cases of that type, if you give it early enough, the results have been pretty satisfactory.

I can't work to any statistics where the mortality is reduced to 20 per cent, and feel they carry a great deal of infection, but I do believe one of the most valuable services in recent years is the use of oxygen. I thing oxygen has helped us a great deal in our therapeutics. The recent suggestion of Henderson of the use of carbon dioxide in the disease may be of great value, provided you get the case early enough. By giving this you can prevent this anaphylaxis. This means you have got to see the disease early, but if you don't you can use all the carbon dioxide in the world if you have got a consolidation present, and you will get no results.

Dr. Walker (closing): I want to thank the gentlemen for this discussion of my paper, and several new thoughts possibly have been brought out which I didn't bring out.

Now, I am an advocate of digitalis. I have used it all my life in practice, and I mentioned in the paper about the use of digitalis. Many a good drug, and also digitalis, does not act with a high body temperature. Don't forget that. Then you have got to have a heart that digitalis will act upon. What I mean by this, a heart that will fail or is failing too fast. You have got to have that. It has nothing to do with the heart in the beginning of pneumonia, unless that heart has failed under other circumstances before the development of pneumonia.

As to the use of whisky, that is condemned by some. I condemn it in certain cases. There are cases of pneumonia in which no treatment is needed; they will get well anyhow; give them some water and rest and something to eat and they will get well. That is all he needs. But I mentioned in there in case of the feeble, I know of no stimulant better than whisky. Strychnine and other drugs I have used do not seem to serve as well as whisky judiciously used. Know your man before you start your whisky. Some people can't take as much whisky as others. You can find that out by starting with small amounts. Now, as to the place of getting it,—all I can say is, know your neighbors. That is the only advice I can give.

THE USES OF SODIUM ETHYL-1 METHYL-BUTYL-BARBITURATE (PENTOBARBITAL-SODIUM) IN MEDICINE AND SURGERY.*

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Within the past two years the employment of derivatives of barbituric acid has markedly increased due to close study and extensive experimentation in many places, chiefly, in the United States. Literature is becoming voluminous. Lundy quotes some four hundred and sixty-six references.[1]

Derivatives of barbituric acid have long been known as sedatives and hypnotics, but it is only recently that research has made available one or more that fill satisfactorily a long felt want. While our experience has been gained through the employment of several derivatives of barbituric acid, this report will deal chiefly with one in particular which has been found most satisfactory, and the others mentioned only in a comparative sense. Sodium ethyl-1 methyl-butyl-barbiturate is known commercially as pentobarbital-sodium (Abbott).†

Pentobarbital-sodium, an isomer of sodium iso-amytl-ethyl barbiturate, is about twice as potent as sodium amytal, acts in a shorter time, and is essentially sedative.[1] Hypnosis can be secured but is of much shorter duration than that of sodium amytal, and less frequently followed by restlessness or delirium.

USES.

This preparation finds its chief field of usefulness as a sedative for preliminary medication to local, general and spinal

*Read before Harrison-Stone-Hancock Counties Medical Society, May 6, 1931.

†When first offered this product was christened "embutal" later changed to "nembutal" pentobarbital-sodium and is supplied in 1½ grains capsules for oral and rectal use and 7½ grains ampoules, for intravenous use.

anesthesia. In preparing patients for operation as in emergencies, accidental and traumatic injuries, the rapid effect, small dosage and short duration of effect is advantageous. While pentobarbital-sodium is not intended as a lone anesthetic, properly graduated dosage will produce a degree of anesthesia under which much can be done without additional agents being employed. In properly selected cases under skillful manipulation, extensive surgery may be done with the employment of local infiltration, or a very small amount of inhalation anesthesia. Its use in local and spinal anesthesia has been found to raise the tolerance to normal and reduce to a minimum the liability of disagreeable reactions and sequelae. It has been found that the administration of 1½ grains in capsule orally, the night preceeding the operation, 3 to 6 grains with or without morphine and atropine injection, one hour before operation, brings the patient into the operating room somnolent but responsive, free from apprehension and fear, and requiring a very small amount of inhalation anesthetic to induce complete surgical anesthesia and is accomplished rapidly and without excitation. Recovery is rapid, due to the small amount of anesthetic employed, and is usually unaccompanied by nausea or vomiting, the period of sedation lasting several hours. There is no way of accurately determining the extent of damage done by psychic shock preceeding operative work. This condition is most apparent in children and nervous, apprehensive adults. That it is quite considerable is made evident by its almost complete absence in those patients treated with pentobarbital-sodium. The dread of an operation when carefully analyzed usually means fear of the anesthetic. The majority of patients who have undergone operative manipulation know very little concerning the actual operation or what was done at the time, but most of them retain a vivid recollection of the anesthetic, pre-operative as well as post-operatively, and I recall but few instances where this particular experience was considered a pleasant one.

Pentobarbital-sodium may be used orally, rectally, intramuscularly or intravenously. Rectally the dose must be increased and the pre-operative time of administration accurately guaged. Where time is an element of consideration, the intravenous method is the most satisfactory. In this method the injection of a solution containing a measured quantity of the drug, results may be obtained with a nicety and accuracy that is impossible in any other method. Considerable latitude in dosage was found necessary due to the individual reaction. Effectiveness was observed to vary with age, general physical condition and the dose required to produce sleep was best determined by the rate at which the subject became unconscious. A solution containing 50 mg. (¾ grs.) per c.c. injected at the rate of 1 c.c. per minute will produce unconsciousness within two or three minutes, and seldom is it necessary to administer more than 3 to 5 grains. The maximum in our experience has been 7½ grains (0.5 gram.), which produced a deep hypnosis, and in some cases complete anesthesia. This dose is considered seldom necessary as it has been found satisfactory to depend upon a small amount of inhalation anesthesia to produce muscular relaxation. It is by this method that effect can best be estimated and the injection discontinued immediately upon the desired effect being obtained. It is found expedient to engage the patient in conversation, continuously during the injection time, and in that way become immediately aware of the effect of your dosage. It is amazing when first observed how quickly the patient passes into an apparently normal deep sleep. The measured dose of the drug does not always cause complete anesthesia. In such cases the patient when undisturbed has all the appearance of being anesthetized. However, when operative procedure is begun the patient reacts to painful stimulus and becomes restless or even

resistant. If the patient is immediately given a few inhalations of gas, or ether, he becomes completely anesthetized and remains under the pentobarbital-sodium anesthesia without further use of the supplementary anesthetic.

The preparation is usually administered in 5 per cent so'ution or 7½ grains dissolved in 10 c.c. of sterile distilled water which enables one better to control the dosage. The solution should be freshly prepared for each case as it hydrolizes in aqueous solution, and only perfectly clear solutions should be used. There is no nausea or vomiting, the blood pressure frequently falls slightly at first, only to return to the previous level or above in a short time. The respiration becomes lessened in amplitude, the rate slowed, no cyanosis has been noted. Any marked depression of respiration or excessive fall in blood pressure calls for an immediate cessation of the injection. In our series of cases there has been no severe interference with normal function noted. It is well to keep in mind, however, that any drug capable of producing hypnosis and anesthesia is dangerous and must be emp'oyed with care and complete knowledge of its action.

CONTRA-INDICATIONS.

As in general anesthesia, the aged, high or low blood pressure, arterio-sclerosis and unstable cardio-vascular systems, pulmonary involvement or edema about the neck or throat are contra-indications. The chief dangers are broncho-pneumonia, and post-operative pulmonary edema. These are noted only after excessive doses. We have not found shock to be a contra-indication provided the chest was not involved by injury. Known cardiac cases have responded satisfactorily. Pentobarbital-sodium shou'd not be given after large doses of morphia. It is not considered advisable to administer the drug except in smaller doses in the presence of known kidney impairment. Pentobarbital-sodium is twice as toxic as sodium amytal, and its action much shorter.[2] I have administered it as a basal hypnotic in cases ranging in age from four to sixty-seven years, both sex, white and colored, orally, rectally, intramuscularly and intravenously, emaciated and obese, in a very wide variety of operative conditions, varying from simple incision and suturing to most extensive laparatomies, in patients in whom the immediate operative risk was great, in cases where ether, gas and spinal anesthesia was used. With the exception of spinal anesthesia, nitrous oxide with oxygen and the addition of ether when necessary were the supplementary anesthetics used. In many instances patients object to or fear an anesthetic more than an operation. This condition can be obviate by injecting the case in his room, where he goes to sleep and awakens, with no recollection or knowledge of having been out of his bed. It is remarkable how pleasantly surprised many patients are on awakening when they fully realize that they have no recollection of operation, operating room or any thing attendant thereupon.

Pentobarbital-sodium has been found useful and dependable in cases of tetanus, eclampsia, delirium, alcoholic and otherwise, and convulsive seizures arising from toxic conditions of the intestinal canal or kidneys. Convulsions are quickly controlled and subsequent medication is not interfered with to any great extent.

OBSTETRICS.

Recent reports have shown the drug to be very satisfactory in the delivery room, being administered orally in 3 grain doses. Where delivery is prolonged this may be repeated, it has been used in solution 5 c.c. containing 3¾ grains intramuscular, at the end of the first stage with or without morphine or H.M.C. No. 1. This dose may be repeated if necessary. Consciousness usually returns in four to six hours, there is no irration from the injection, after pains are conspicuously absent, and there is very little restlessness. There is no

effect on uterine contractions, nor has ill effect on the baby been noted. My personal experience in the obstetrical use of this barbituric preparation has been limited.

CASE REVIEWS.

The following cases are reported as typical ones in which the use of pentobarbital sodium is demonstrated:

A. C., white, female, aged 35 years. Admitted for tonsilectomy; highly nervous, dreaded anesthetic and was considered unfit for local anesthesia. Blood pressure 115/60. Heart, lungs and urine negative. Patient was given 4 grains pentobarbital-sodium intravenously in room, hypnosis was complete in 3 minutes. Patient removed to operating room, tonsilectomy performed with the addition of 2 ounces of ether. Recovered consciousness in two and one-half hours, but slept if undisturbed. There was no nausea or vomiting and patient was very much pleased with result; recovery uneventful.

A. P., white, male, aged 62 years. Admitted for herniotomy, rt. inguinal. Heart, lungs and urine normal. The patient dreaded taking ether. Six grains of pentobarbital-sodium was given intravenously while in bed. Profound hypnosis in 3 minutes. The operative field was injected with one-half per cent novocain. Herniotomy completed; a few inhalations of nitrous oxide and oxygen was given at finish as patient was showing return of sensation. Slept three and one-half hours but could be aroused. No nausea or vomiting and patient had no recollection of having been out of room; recovery uneventful.

Mrs. F. W., white, female, aged 30 years. Heart and lungs normal, urine was not examined. Admitting diagnosis: incomplete abortion with severe hemorrhages. Patients pulse was 130, she showed marked effect from hemorrhages, almost exsanguinated. Blood pressure 100/50, she was placed on table and 800 c.c. of a glucose solution given intravenously. Five grains of pentobarbital-sodium was introduced with this solution. Hypnosis was immediate and complete. The uterus was dilated, a partially detached placenta removed, and uterine cavity was swabbed out. No other anesthetic was used. Anesthesia was perfect, there was no sequellae, and patient was put to bed within 35 minutes after admission in much better condition than when admitted. Blood pressure 110/60, slept 2 hours and 15 minutes, but could be aroused. No nausea or vomiting; recovery uneventful.

Miss B. S., white, female, aged 22 years. Admitted for appendectomy. Heart, lungs and urine negative. Blood pressure 120/70. Five grains of pentobarbital-sodium was given intravenously in room. Hypnosis was immediate and complete. Appendectomy completed with the addition of 2 ounces of ether in order to secure more complete relaxation of the rectus muscles. There was no nausea or vomiting. Patient slept for 3 hours and on awakening had no recollection of having been out of room; recovery uneventful.

Mrs. J. H., female, white, aged 36 years. Admitted for pan-hysterectomy, large uterine fibroid. She was given one and one-half grains in capsule the night before and three grains pentobarbital-sodium in capsule one hour preceding operation, together with 1/6 grain morphine and 1/200 of atropine, also ¾ grain ephedrin. Patient came to operating room somnolent but responsive. Spinal anesthesia was used, no marked interference with blood pressure or respiration was noted. A pan-hysterectomy, bilateral oophorectomy and appendectomy was completed without additional anesthesia. There was no nausea or vomiting, and no sequellae; recovery normal and rapid.

Case J. R., white, male, aged 32 years. Admitted for incised wound of left forearm, severing skin, muscles and tendons. This patient was very much under the influence of liquor, he was given 7½ grains of pentobarbital-sodium intravenously which produced complete hypnosis in 3½ minutes. Saturing of muscles, sheaths, tendons and skin completed without any other anesthetic. Patient slept 4 hours, was nauseated and vomited on awakening, which was evidently due to a large quantity of food mixed with whiskey. There was no further vomiting; recovery uneventful.

M. W., colored, female, aged 32 years. Admitted for multiple deep incised wounds of face, arms, back and shoulders, knife wounds severing muscles and tendons. Had lost lots of blood. She was given 7½ grains of the drug intravenously, with 800 c.c. of saline solution containing adrenalin. Hypnosis was complete in 2½ minutes. Bleeding vessels which had previously been clamped, were ligated. Suturing of muscles, sheaths, tendons and skin completed after one hour and 25 minutes work. No other anesthetic used. Patient left table in excellent condition. No nausea or vomiting. No sequellae; recovery normal.

J. K., white, male, aged 4 years. Admitted for circumcision and tonsilectomy. Three grains of pen-

tobarbital-sodium was given per rectum one hour and 30 minutes preceeding operation. Patient was asleep when brought to operating room. Tonsilectomy, adenectomy and circumcision completed with the additional use of 2½ ounces of ether. No nausea or vomiting; recovery uneventful.

A. G., white, male, aged 65 years. Admitted for cholecystectomy, heart hypertrophied. Lungs normal, urine negative. Blood pressure 130/80. He was given 1½ grains of pentabarbital-sodium in capsule night before, and 3 grains with 1/6 morphine and 1/200 atropine, one hour preceeding operation. Patient entered operating room somnolent but responsive to questions. Spinal anesthesia was used. There was a fall in blood pressure to 118/60, but no respiratory depression. Operation was completed and no other anesthetic used. No nausea or vomiting. Patient returned to room in excellent condition. No sequellae; recovery uneventful.

J. A., white, male, aged 69 years. Diagnosis sarcoma of right testicle with large hydrocele. Heart hypertrophied; lungs negative; urine negative. Blood pressure 135/90. He was given 1½ grains of pentobarbital-sodium the night before and 3 grams one hour preceding operation, with 1/6 grain of morphine and 1/200 of atropine. Patient came to operating room somnolent but responsive. Sacral block was used to complete anesthesia. No other anesthetic was used. Patient slept through the operation which consisted of the removal of the testicle and hydrocele sac. He could be aroused when spoken to. No nausea or vomiting, no marked depression of blood pressure or respiration, returned to room in good condition and slept for 2 hours; recovery uneventful.

SUMMARY.

Ten cases, selected as to sex, age, physical condition and operative procedure contemplated give a fair idea of the value and effectiveness of pentobarbital-sodium as a basal hynoptic when administered with an understanding as to drug action, type of patient and result desired.

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THE STANDARD TREATMENT OF MALARIA.*

(A PRELIMINARY REPORT).

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An eminent physician has said "The sum total of medical knowledge represents the accumulation of reports on their work by worthwhile observers. None of these individually represent the last word, and from few of them can a definite conclusion be drawn, but put together they mean everything in the advancement of science." This statement has encouraged me to present the records in a series of 1,562 cases of malaria.

Despite the fact that 1930 marked the 300th anniversary of the first application of quinine in the treatment of malaria, the 120th anniversary of the extraction of the quinine alkaloid from cinchona bark and the 50th anniversary of the discovery of the parasites of malaria, we still find considerable diversity in dosage and method of administration of quinine in malaria.

The disease has been recognized for many hundreds of years. Hippocrates described the tertian, quartan and quotidian and differentiated them from other fevers. He believed them to be caused by black bile and this theory was accepted until the Renaissance, giving way to the theory of miasms first proposed by Lancisi (1717). He observed that tertian paroxysms often terminated in 5, 7 or 9 revolutions, but Potter, 2,200 years later, disagreed and stated that paroxysms ending spontaneously in the fall, recur in the spring. Lancisi in 1718 suggested the possibility of the disease being caused by the introduction into the body of poisons by the bites of mosquitos and other smaller insects. In 1875 Binz offered the hypothesis that a living organism was the cause of malaria

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and 5 years later Laveran demonstrated the plasmodium. Ross, in 1898, proved the transmission of the disease by certain mosquitos and in 1911 Bass and Johns cultured the organism outside the body.

In 1620 the Countess of Chinchon, wife of the viceroy of Peru, was cured of malaria with cinchona bark. deCanizares, a layman, knew of its use by the natives prior to that time and recommended that it be tried.

The introduction of the drug into Europe produced a profound change in the course of medical thought. For 14 centuries the science of medicine had been based on the Galenic theories. The brilliant success with cinchona of Sydenham in England and Torti in Italy, while strongly decried by the disciples of Galen who saw the overthrow of the foundation stone of medical practice up to that time, marked the beginning of the end of Galenism.

Torti really solved the question of the treatment of malaria both as to the mode of action and the method of administration of cinchona. He stated that cinchona was an antidote to the cause of the fever without causing any evacuation of an injurious material. He gave 2 drams of the bark (equivalent to 5 grains of quinine alka-loids to prevent a paroxysm either at the beginning or toward the end of the previous one. Then after one or two days he gave 1 dram for 2 days in succession, followed by ½ dram early every morning for eight days. Fifteen days later he gave 20 grains every morning for 6 days and repeated this last course several times if necessary and said "6 scruples taken on 6 succeeding days are by no means equal in efficiency to 2 drams taken at once, although the weight is the same. Whereas a wood fire can be easily extinguished with a pound of water if it is poured over the fire at once, two pounds will not be enough if it be dropped on the fire drop by drop and at long intervals." With Sydenham he rejected all adjuvants and used the powdered bark alone in wine. He proposed the name "Mal Aria" for intermittent fever, but it was not generally used for many years.

In 1820 Pelletier and Caventou extracted the alkaloid quinine from cinchona bark, materially simplifying the administration of the drug. Potter, 6 years later recommended 2 or 3 grains every 2 hours for 6 or 8 doses (12 to 24 grains), continued for 7 or 8 days.

Four years later Dewees said that quinine had already almost superseded cinchona bark. He recommended 1 grain every hour during intermission of the quotidian up to 1 hour before the expected paroxysm, and in tertian or quartan 1 grain every 2 hours. He said there was little advantage in excessive doses and especially objected to large doses just before the recurring fit. To prevent recurrence he advised a few doses on the 7th, 9th and 13th days with hygienic advice and removal from the malarious locality.

Sorbenhiem in 1840 said "Quinine has gained a permanent reputation as well as the name of a specific remedy in this disease (intermittent fever) and, immaterial how many surrogates have been recommended in its place owing to the high price, from alkornoko, mahogany wood, common yellow wall lichen, barks of chestnut and willows down to spider-web and the sawdust of autenreith, none have been able to replace it.." He recommended 12 to 16 grains in tertian and quotidian, 20 grains in quartan and in the pernicious forms 2 to 6 grains and even up to a scruple to a dram and a half every 2 hours. He advised that the drug be given for some time after the fever had disappeared.

In 1852 Dr. Geo. B. Wood recommended 12 to 24 grains of quinine sulphate during the intermission of intermittent fever. He stated "It is seldom, however, that less than 12 grains in each intermission can be re-

lied on. I have repeatedly known cases treated for a considerable time with smaller doses without effect to yield immediately to the medicine in large quantities." He said further, that if the treatment does not prevent the second paroxysm, that the dosage should be increased "to any amount which may be necessary to produce its peculiar effect on the brain, whether that amount be the larger quantity above mentioned or much more." He said that other physicians of his day prescribed 30 to 60 grains or even 100 grains in 24 hours. He says "I do not remember ever to have found more than 24 grains, in that period of time, necessary." He recommended that it be given in small, frequently repeated doses throughout the intermission, and that it be continued "as long as the least vestige of a paroxysm remains. Should the physician suppose that he has conquered the disease when he has reduced the violent ague and fever to a few disagreeable sensations at the regular period, and under this supposition omit the medicine, he will frequently be disappointed to find the paroxysms resuming their original violence." He further says in reference to other drugs used for the cure of malaria "Few of them, however, have stood the test of trial and not one has yet satisfied the profession generally of its claims to supersede the sulphate of quinia."

About the same time (1857) Dr. Dunglinson advocated 5 grains one hour before the expected paraxysm, repeated in one-half to three-quarters of an hour. He said, however, that much larger doses had been given—as much as 90 grains and more in the 24 hours, "But" he stated, "it is questionable whether such large doses can be necessary." He reported that an Alabama physician had administered 30 grains of quinine sulphate in solution every hour for 17 successive doses; that a western physician "emptied into the stomach of a patient laboring under bilious remittent, an ounce bottle in one night" and that Dr. B. Rush Mitchel "in a case of congestive fever gave 30 grains every half hour until 240 grains were taken in about 4 hours; and", he naively continues, "the patient recovered."

Dr. H. C. Wood, stated in 1877 that the use of quinine in malaria was purely empirical but that its action in malaria was unmistakable. He recommended in pernicious fever at least 35 grains of quinine during the first day of intermission and 25 grains during the second and states that "less than 50 grains of the drug sometimes appears to do but little good."

By the beginning of the present century the cause of malaria and the mode of action of quinine as a protoplasmic poison had been demonstrated and the treatment of the disease placed upon a rational basis. Prior to this time the object of treatment had been to reduce a given attack of fever, but now the aim was to rid the system of the parasites. Sir Ronald Ross about this time advised not to exceed 30 grains daily to be continued for one week after the last paroxysm, then 15 grains for two weeks when the dose was further reduced and continued for at least three months. He advised that the dose in the acute stage should be given one hour before the expected paroxysm, but in the remitent type to give it in three doses throughout the day. For the first time it was advised not to wait for an intermission but to give quinine regardless of the temperature.

Osler recommended 10 to 30 grains daily in divided doses for three days and in smaller doses for 2 or 3 weeks. In the aestivo-autumnal type, he said that large doses might be necessary.

Dr. John B. Elliott, Sr., taught his pupils to give 10 grains 4 hours and 10 grains 2 hours before the chill time for several days and to repeat on the seventh, fourteenth, twenty-first and twenty-eighth days.

In 1919 Dr. Bass published a report of an investigation of the treatment of 25,000 cases of malaria infected persons and ad-

vised the procedure which was recommended during that year by the National Malaria Committee as the "Standard Treatment for Malaria." It consists of the administration of 10 grains of quinine sulphate three times a day for at least three days, or until the clinical symptoms have subsided. Then 10 grains each night for a minimum period of 8 weeks but longer if necessary.

Dr. Bethea in his recent book on Clinical Medicine recommends the "standard" treatment but suggests that the dosage might be regulated by the amount of blood in a patient's body so that a standard concentration of the drug in the patient's blood is effected in each case. This may be calculated by the weight. Using the 30 and 10 grain doses as a standard for a person weighing 150 pounds, the dosage would be 1 grain daily for each 5 pounds of body weight for the intensive course and 1 grain for each 15 pounds for the subsequent treatment. Binz (1875) had found that a solution of quinine not lower than 1 to 4,000 was necessary to cause cessation of ameboid movements of fresh water amoeba. On this hypothesis, Bacelli (1890) found that 1 gram of quinine injected intravenously in a patient with malaria weighing 130 pounds, producing a concentration in the blood of 1 to 5,000, was necessary to control a paroxysm, and that it must be administered at least three hours before the paroxysm. Lower concentrations failed to produce the desired effect.

Dr. Bass in a paper presented at the 1930 meeting of the A. M. A. says "Quinine is so specific in malaria that I believe it can be relieved of clinical symptoms and finally cured of the infection with sufficient doses for a sufficient length of time, with the possible exception of severe cases in which too great damage has already occurred. Such cases are extremely rare. They are so rare as to permit an authority with the large experience of Major J. A. Sinton to say only recently that among more than 1,500 patients suffering from benign tertian malaria, he had not found a single case of quinine resistance, although many of them arrived with histories of having this condition; nor did he see relapses occur during the course of quinine treatment."

Medical men are averse to using routine treatments, and rightly so. The present trend is toward the treatment of the patient rather than the disease. But malaria is in a class almost alone. It is the classic example of a disease having a specific remedy and for this reason there must be a best method of administering the drug. There may be minor variations to suit special cases without a departure from the standard procedure. As stated by Dr. Bethea "After the plan has become firmly fixed in the minds of medical men, it may be permissible, or at times even desirable to individualize the treatment.

In an industry at Baton Rouge employing approximately 5,000 men between the ages of 18 and 70 years, including both white and colored, it was found that 17 per cent of all illness was due to malaria. Many men had two or more attacks every summer. Although the medical department for this plant does not treat disabling illness among the employees, it was felt that the amount of time lost from malaria could be reduced by treating these cases. Early in 1925 the record of each employee covering a period of two years was checked and we found that 709 had had one or more attacks of malaria during this period. A single examination of the blood of each of these men was made, and in 79 (11 per cent) plasmodia were found. Repeated examinations would doubtless have brought to light other cases. None of the 79 had any symptoms and were treated without losing time. Thereafter the blood of each man with symptoms of malaria, or that was treated for malaria other than by us, or in whom we had reason to suspect the disease, and as a routine in

certain cases such as heat cramps and "sprained backs," was examined. Treatment was given in all cases showing plasmodia except those already under treatment of a physician. In these latter cases the physician was given a report on the result of the examination. The standard quinine treatment was used routinely. In some cases with idiosyncrasy for quinine, in some who objected to the quinine effects and in those we suspected were not taking the quinine as directed, sodium cacodylate was given in 3 to 5 grain doses, hypodermically, three times a week for four weeks. In a few cases apparently not controlled by quinine for several days, both quinine and the cacodylate were used. In a few chronic cases during the past year the standard treatment was followed by plasmochin with quinine. In a few cases the treatment was varied slightly or additional treatment was given to meet specific conditions. In from 10 to 30 days after the treatment was completed another blood examination was made.

In the past 6 years we have found the plasmodia in 1,562 cases. Of these there were:

	Number of cases	Per cent of type noted
Tertian	982	86
Quartan	151	13
Aestivo-autumnal	6	
Tertian and quartan	2	
Type not noted	421	

	Number of cases	Per-cent of treated cases
Treatment given was:		
Standard quinine	1278	90
Sodium cacodylate	65	5
Quinine and sodium cacodylate	70	5
Treated by other physicians	133	
No treatment or did not follow instructions	16	

Results of blood examination after treatment:

	Number of cases	Per-cent of those examined
Negative	1257	92
Positive	111	8
Not examined	194	

During the first three years of the series, the treatment that had been given to the cases that were found positive after treatment, was not noted. In 802 cases in which this point was noted there were:

	Number of cases	Blood positive after treatment	Per cent
Standard quinine	696	68	10
Sodium cacodylate	67	5	7
Quinine and sodium cacodylate	39	4	10

56 cases had been treated by us the previous year, 7 had the treatment for the two preceding years and one case was treated for each of the three preceding years. These might also be classed with the failures.

In 77 cases taking the standard treatment it was necessary to give the 30 grain dose daily for a longer period than 3 or 4 days in order to control the symptoms.

The method of administration was to give the patient 99 grains in the tertian cases and 120 grains in the quartan to be taken 10 grains three times a day. The patient was instructed to return when the medicine was all taken and was then given a sufficient quantity to complete the treatment of 10 grains every night for 8 weeks.

The cases treated as above outlined lost an average of 6 days per case while during the same period all cases of malaria in the group of employees averaged 11.5 days per case—almost double the rate for our series. In addition to those losing time, 543 cases were treated without the loss of time, further reducing the time lost in our series to 3.5 days per case—less than one third of the plant rate. Immediately following the inauguration of our plan, the plant malaria rate fell steadily. The rate per 1,000 employees annually fell from 110.4 in 1923 and 97.2 in 1924, the two preceding years, to 82.8 in 1928. In 1929 there was a sharp rise which was maintained in 1930. This increase in malaria was general in East Baton Rouge Parish and through-

out the South. The days lost from malaria also showed a steady decline from 1.31 days per employee per year in 1924 to .93 days in 1928. This represented a saving of 1900 days in 1928 over 1924 for our employees. There was no special anti-malaria campaign carried on in our parish during this period. In fact there was such a campaign two years before our plan was put into effect.

The 10 per cent failures in our treatments may be accounted for by reasons other than the inefficacy of the quinine. 53 per cent of the malaria cases at the plant were negroes and it is probable that many of them failed to complete the treatment. 27 per cent in our series lived in unscreened houses and reinfection doubtless played a part in the relapses.

The disadvantages of the standard treatment are that many people object to quinine effect and are prone to discontinue the treatment before it is completed. There are also some persons with a marked idiosyncrasy for quinine.

The advantages are its efficiency—90 per cent of apparent cures in our series; its low cost; its ease of administration and simplicity of dosage; and its safety.

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DISCUSSION.

Dr. O. W. Bethea (New Orleans): I once heard an old preacher complain that he had a great many parishioners who wanted to contribute but they had empty pockets. He also had a great many with full pockets but they didn't have the desire to contribute. What he wanted was parishioners who had both ability and willingness at the same time.

We have in medicine a great many physicians who have the medical material and won't use it, and we have a great many who would contribute to science but they haven't the where-withal with which to work. My very good friend, Dr. Adams, has the opportunity and with his accustomed industry and thoroughness has made a distinct contribution to the sum total of medical knowledge.

There is just one particular feature about his work that I think we could discuss with some interest, and that is these were house treated cases, as I understand it, and therefore they were not under the immediate and direct control of the physician and trained assistant.

In my service at the Charity Hospital I have used the Standard Treatment exclusively since it was first developed. I have had only one case reported to me as quinine-fast and we had the trained nurse on the service administer the quinine in person. This was done by making the patient open his mouth, protrude his tongue and then the nurse placed the quinine well back, handed him a drink of water, watched him while he drank it and then with the tongue depresser examined the inside of his mouth well, to see that the capsules had actually gone down. This patient was clinically well in forty-eight hours.

Most of you will remember the classical experiment of Ross, who gathered up approximately two thousand quinine-fast cases during the World War, put them in a base hospital and had the medical officers to administer the quinine personally and see that it was actually swallowed. All of the patients but one were well in two or three days. It took them a few days longer to catch the other fellow.

Soon after the Standard Treatment was put into use Tulane University invited the physicians in New Orleans to report any cases that were not promptly relieved by this plan of medication. The first report came in from one of our local hospitals and was investigated by one of the teachers in the medical department. He looked over the

patient's bedside notes and said that he did not see any record of quinine having been administered. The attending physician said that he had instructed the interne and the interne said that he had instructed the nurse and the nurse said that she had received no such order. At least this is the story as I remember it.

In investigating the next case reported, the order was found duly entered, the nurse's notes showed the quinine as having been administered, but a search of the patient's bed disclosed all the capsules intact.

If these patients had been treated under Dr. Adam's immediate supervision and control and the quinine had been taken as ordered, I believe that instead of something like ten per cent of failures this group would have been close to zero.

Dr. C. C. Bass (New Orleans): Unfortunately, quinine is not as good a remedy for malaria as we would like to have. I do hope we will some day have a better remedy. Up to the present time I believe we can say without any reservation whatever that nothing even approaches quinine in its value for the control of the clinical symptoms of malaria. It is so perfect a remedy for the control of the clinical symptoms that, as Dr. Adams stated in his paper, people with rather large experience have been unable to find even a single instance in which the clinical symptoms are not controlled. Several years ago I tried to find some of these so-called quinine-fast cases and was not able to find any that stood the test of thorough investigation. There may be such cases. I suppose there are. If so they are hard to find.

With regard to the cure of the infection, quinine is a less satisfactory remedy than it is for the control of the clinical symptoms. If there is variation in the effect of quinine on different individuals in the control of clinical symptoms, there is still very much greater variation in the cure of the infection. It is not unusual to observe cases of malaria getting well and rid of their infection, following only a few doses of quinine or a few days of treatment with quinine. We observe other cases, perhaps occurring in the same household, in all probability infected from the same source and with the same strain of parasites, where even six or eight weeks of continuous quinine treatment fails to cure the infection and prevent relapse.

It isn't a difference in the amount of quinine because we give the same amount. It isn't a difference in the type of parasite because the patients may be infected, in some instances, from the same source. The difference lies in the effect of quinine on malaria in different individuals. This is probably due to a difference in the disposal or neutralization of quinine in the body of different individuals.

We have no method, at the present time, of recognizing in advance, those individuals who require a long period of treatment and those who will be cured in a shorter period. For that reason we have to select a long period of treatment, unnecessarily long in many instances, such as the standard treatment is. Whenever we give a patient eight weeks of quinine treatment when he only requires one week, we certainly are punishing him with six or seven weeks of unnecessary treatment. If we had any way of picking out the individual who required only one week and the other who would require six, and the other who would require eight or more, we would treat them accordingly. We certainly do not have any way now. Neither do we have any way of determining when a patient is cured. We can treat patients for a week or two and examine them, but we are unable by any method of examination we have to determine that the infection is cured. A negative finding means nothing in this regard. Therefore, we have to adopt, under existing circumstances, some such method of treatment as this standard treatment which gives a high percentage of cures. Even eight weeks treatment doesn't give cures in 100 per cent of cases. If we lengthened it still more to perhaps three months or more, then we probably would cure the infection in 100 per cent of cases. But many patients would be subjected to unnecessarily long treatment.

I do believe that the eight weeks period of treatment is a very satisfactory one and that the results are good enough for most purposes. We must hope that sooner or later we will have either a better remedy than quinine or some method by which we can ascertain when a patient is cured or how long it will take to cure them. At the present time we can only guess, and the best thing is to treat them all a sufficient length of time to cure a large percentage.

Dr. A. A. Herold (Shreveport, La.): I had an amusing incident a few years ago like the one Dr. Bethea referred to. I had a lady with an acute attack of malaria, and I prescribed two dozen capsules of quinine to be taken two every four hours for twenty-four hours. I found on my return that she had more fever than before, and a chill. I counted the capsules and found only four were gone. So then I cautioned her about it.

The following day the same thing happened. The necessary number of capsules were gone, but

as I was leaving the house the maid told me to look behind the bed. The capsules were on the floor. I found her husband and he had to get a nurse who would see that the capsules were properly taken, with good result.

What I arose to say especially as Dr. Adams didn't refer to it, is that in these cases of so-called quinine-fast malarias or where you do not get the result, as in this case, it has been my practice (and I have never seen any ill effects from it) to give two doses of quinine intravenously daily until the malaria is controlled. Then I leave capsules with the patient with instructions for taking them, and if he doesn't want to follow those instructions that is his own responsibility.

I know Dr. Bass has told us that the capsule by mouth is as efficient as any other way, but for some reason either the patient doesn't take them or don't absorb them at times, and I have never seen the quinine administered intravenously have any ill effects.

I would like to have Dr. Adams discuss that in closing.

Dr. S. J. Couvillon (Moreauville, La.): I don't know whether I should rise to talk following such experts as Dr. Bass, Dr. Bethea, Dr. Adams and Dr. Herold. I'm from a section where there exists a good deal of malaria. The paper of Dr. Adams' is of special interest to me and I'm sure also to my confreres who are here from the country districts.

Of course, the first thing to do in the treatment of malaria is to diagnose the case correctly. Cases with chills and fevers coming on periodically and otherwise, are not always of a malarial origin. The chronic and even the sub-acute forms of the disease come to us at all times of the year with such manifestations as rheumatisms, neuralgias, with and in the absence of febrile phenomenas. We also have cases coming to us with blood in the urine, hemoglobinuria, diarrhoeas, with and without chills and fever, conditions which are actually malarial infection and we have to adopt the standard treatment for the cure of these various ailments.

I have found nothing better than quinine sulphate by the mouth for the treatment of acute and chronic cases of malarial fevers and while Dr. Bass mentioned that he hoped we would find something better in the future, I do not believe we will ever, because there are no substitutes at our command, never had any, to exceed the quinine treatment of that disease in our country.

In both the acute and chronic cases I follow the Bass system. In acute cases I give four grains of the sulphate for three days and nights, preceded by a strong purgative. The chronic cases are treated likewise for three days and nights, but is extended with ten grains of quinine every night for thirty, sixty to as long as ninety nights uninterruptedly, depending on the severity of the infection.

There has been very little mention if at all of the preventive treatment of malaria-measures in mind which is of a paramount importance. Where I live, which unfortunately has been the overflowed section of Avoyelles parish, where the mosquito is plentiful, our people are very much impoverished due to the flood ravages and other reverses and as a consequence have not been able to screen their homes properly. Due to education and economic principles everyone is rapidly and thoroughly screening their homes and I'm proud to say that the malarial pest is largely minimized. In passing, I wish to say that the man who invented the screens certainly has a place in Heaven, because it's the best means at our command to prevent the infection. It serves not only to prevent the disease, but the relapses. Following the long quinine treatment in the chronic cases, the anaemia is corrected by the uses of the elixir of iron-quinine-strychnine and those poor patients usually get perfectly well. I want to thank you for allowing me this time to discuss so timely a paper.

Dr. R. McG. Carruth (New Roads, La.): I had not intended to say anything on this subject. This society has heard me quite a number of times in the last twenty or twenty-five years make brief talks on the subject of malaria and its treatment with quinine.

I come from a lowland country, like my friend, Dr. Couvillon, which was so infected with malaria when I went there in 1880 (that was before most of you here were practicing medicine) it seemed it had crowded out everything else, if I may use such an expression.

I am not going to tell you so much about the quinine-fast cases, but I am going to tell you a little bit about what I call quinine idiosyncrasies. We had so many families, especially in a few Creole neighborhoods, who could not take a single (they told me) grain of quinine. I know that in from thirty minutes to two hours, possibly a little longer, five grains would bring on copious hemoglobinuria, and I have seen it tried and tried again. I thought possibly there was some mistake about it.

I was once absent from my home when another physician, a recent graduate, was called in to see a case in my clientele and he insisted on giving the patient five grains of quinine. They tele-

graphed me, they had no telephones in those days, to come home from New Orleans to treat that case of hemoglobinuria because I had previously steered her successfully through two or three attacks of this disease.

And I want to say it was very fatal at that time. We had no screened houses as it was long before the days of modern sanitation. We had malaria all the time. No matter what else the patient had, we always had to give quinine.

As to this idiosyncracy for quinine, I want to tell you that the first time I ever heard of green quinine and red quinine and yellow quinine, and white quinine, it was when I went to that parish. It was in the books, but I had never paid any attention to it. I had to ask my friend, Dr. Ladmirault, possibly Dr. Bass may remember him or has heard of him, a quite aged French physician who stood very high with us and was quite a learned and scientific man but, of course, a little behind the times, about these colored quinines. He used very much in these cases the green quinine—the ferrocyanide. The yellow is the hydrobromide, the red the tannate, and the white, of course, the sulphate and the bisulphate. A good many of the cases that can't take sulphate quinine can take the hydrobromide or ferrocyanide. In all those cases I became most successful in using the ferrocyanide.

I saw an old gentleman recently, some eighty-odd years of age, and when I suggested a little quinine simply as a tonic, not for malaria, his wife said, raising her hands in horror, "Doctor, don't give him quinine."

"You mean the white quinine?" I replied.

She said, "Oh, you will have to give him the green quinine.' And of course I gave the green quinine.

I found ferrocyanide just as effectual, but in larger doses. So far as my general treatment for malaria is concerned, I have followed the Bass treatment ever since I first heard of the Bass treatment which was quite a number of years ago. At first, after breaking up the paroxysm, we gave it for two weeks, three weeks or four weeks, and now, for some years, we give it for six weeks and eight weeks. I have never given the enormous doses of quinine that were usually given at that time in my parish when I first located there.

When a patient had been in the habit of taking thirty and forty grains I succeeded with fifteen, eighteen or twenty grains. Those cases were generally very bilious. Some of them were extremely sallow with a bad form of anemia. They all needed some form of mercury, but I was always cautious in using it. A good many people had been salivated from large doses of calomel empirically given. A great many said, "Don't give me calomel. It will salivate me." I gave it in small but repeated doses and followed with a brisk saline, then combining something with the quinine to keep up the purgative effect I got along with nearly half or not more than two-thirds of the amount that had usually been required.

Dr. James M. Adams (closing): I want to thank the gentlemen for the very generous discussion they have given my paper, and I want especially to take this opportunity to thank Dr. Bass and Dr. Bethea publicly for the encouragement they have given me in carrying out this work at Baton Rouge.

I was glad to hear Dr. Bass say that much less than the amount required for the standard treatment was sufficient for a large number of cases because I have been convinced of that in my experience up there. But I felt, after investigation covering 25,000 cases, that the eight weeks' treatment was the average amount required. I am perfectly willing to follow it and insist on all of our patients taking the full eight weeks course.

I believe it was Golgi who was so enthusiastic that he said one dose in certain cases cured the disease. I think it is perfectly possible that one dose of quinine given intravenously would be sufficient to cure some cases, but they are so few and so many cases would remain uncured after that single dose that I don't think it is up to any of us to even try it.

Dr. Herold said something about the intravenous use of quinine. All the cases we are treating up there are the benign tertian types and the quartan types. Only a very few have the tropical forms, and there are no pernicious forms at all. I have never found it necessary to use the intravenous quinine in any of these cases. I think the success we have in the administration of the medicine by mouth is sufficient so that we are not called on to give any intravenous treatment.

In regard to the idiosyncracy for quinine, we have quite a large number of men, as you all know, people who say they can't take quinine. If you pin them down to it the only reason they can give is the effect it has on the head, the ringing in the head. In those cases we insist on their taking the quinine. But if a man says he has urticaria or edema of the larynx after a small dose of quinine, we take his word for it. The cacodylate of soda is the drug we have selected to use in those cases.

Somebody mentioned the use of screens in the prevention of malaria. That was one of our reasons for starting this work because so many of our cases living in rented houses couldn't put the screen in themselves and the people who owned the houses wouldn't put them in. We felt if we could give them this continued course of treatment we would eliminate a lot of the reinfection that would naturally occur in these houses. By curing at least one carrier in the house we would reduce the chances of reinfection.

One of the reasons we used to hear given quite a good deal for the inefficacy of quinine in some cases of malaria was that the capsules didn't dissolve. I don't believe that is to be considered in these days. We are using a very friable tablet of quinine instead of the capsule in our cases. I don't know that we get any better results than we did when we used the capsule.

HISTORY TAKING.

A. H. LITTLE, M. D.

OXFORD, MISS.

In presenting this subject to you I realize that it is rather an elementary one and one that many of us probably hoped to forget when we were back in the hospitals as internes attempting to keep the case histories of all patients complete and up to date. The information secured by the interne in his case history is not as valuable or as interesting to him probably as the information we obtained in later years in the histories of our private patients. We have learned to spend more time on that part of the history that is more important and go less into detail on the less important phases of the case, never omitting any part however.

There are many outlines and forms used in history taking but no one outline will be found to be entirely satisfactory for every case. If we expect to have a printed form on which we shall simply place a check mark at intervals after having asking a question our history will not be very valuable. Printed forms or outlines are a great aid in preventing the omission of many important points in a history and make a much more neatly arranged history for filing. Forms should always have ample space for all information that one should care to write into the history in addition to the usual questions and answers.

There are several things upon which the value of a case history depends. The historian himself may not have the patience to go into detailed questioning about various symptoms that might be very valuable in leading up to the diagnosis. The patient must also be given sufficient time to answer the questions asked and to add any further information that he may wish to give. On the other hand the historian may spend too much time on some unimportant detail and overlook some of the more essential parts of the history. The patient may lack the intelligence to give reliable information. False information may be given intentionall by a patient which would render a history valueless. Many times a patient greatly exaggerates his symptoms and may paint a perfect picture of a disease probably because he wants to have that particular disease at the time his history is being taken. In this case a history will quite naturally be of less value and we should mention the fact that we suspect the information to be false or that the symptoms have been exaggerated.

The importance of a carefully taken history are numerous. Valuable information leading to the early diagnosis of disease is obtained by which many lives may be saved by the early institution of treatment. An early diagnosis is often probably not made when an incomplete history is taken. Slight impairment of function of various organs of the body produced by previous illnesses may be more easily found when we are aware that the patient has had those diseases that are likely to leave damaged organs in their wake. We will ask a few

*Read before the Section on Medicine at the Sixty-fourth Annual Session of the Mississippi State Medical Association, Jackson, May 12, 1931.

more questions and look a bit more closely in the physical examination when we know those diseases have been present. The history we take of our patient is not a mere scrap of paper, it is a permanent record that contains facts and something that may be referred to from time to time as we continue to see the patient in subsequent illnesses. The patient is glad to know that his physician keeps a record of him and will frequently ask questions about his previous symptoms that might be embarassing should we not have the accurate information at our finger tips.

A noted physician stated recently in an address that if taking a history of a patient did nothing more than give a doctor sufficient time to thoroughly inspect his patient and to allow his patient to relax after coming into his office it served a very valuable purpose. It is my opinion that all of us will agree that we gain much more information from a history than the previously mentioned facts. The diagnosis of possibly fifty per cent of our cases is almost made on the completion of the history and before the physical examination is begun. It is not my intention to over emphasize the value of the history and lead you to think that the physical examination is not just as important for in my opinion they are equally valuable.

I will not burden you by the details of a complete history outline but will call your attention to some of the more important facts of a history and attempt to show why these facts are so important. It is hardly necessary to mention the usual identification sheet containing the full name, address, age, race, sex, etc, never overlooking the occupation which in many cases gives some aid in making the diagnosis and in outlining the treatment. By the time the identification sheet is complete the patient is probably wondering when he is to be given an opportunity to tell of his troubles and this is probably the best time to allow him to state his complaint in his own words but briefly and accurately. After this the present illness is taken up in detail as to the exact time of onset of symptoms, character of onset and course of disease to present time going into each symptom very carefully and obtaining if possible the cause of various existing conditions. In writing the present illness it is well to include the habits of the patient, his living conditions and even at the present time it seems to be in order to inquire into the amount of alcoholic drinks he consumes daily.

After completing the present illness the past history should be written. Many times the present illness will be connected with some past disease or injury that the individual has probably forgotten. The real cause of the present illness may thus be determined by this information. Inquire of previous illness, especially those of a severe nature and if there were any complications, the character and severity of the complication. Surgical operations and severe injuries should be described as to date, severity, complications and date of complete recovery. History of veneral diseases should be described in detail including duration and type of treatment. Unusual tact is sometimes necessary in obtaining this part of the history from colored patients due to the fact that many of them fail to remember these diseases.

In taking the family history we do not gain specific information but do obtain cer-

tain information of general character that is of value in some cases. Certain diseases as tuberculosis, cancer, diabetes, gout, apoplexy, and some nervous diseases seem to have a tendency to recur in families. It is well to list the ages of the father, mother, brothers, and sisters and state whether living or dead.

The physicial examination of the individual is always a part of the complete case history, but because of limited time I will not attempt to discuss that very important part of the history other than to state that if a careful and systematic examination of each and every patient is made after the history is taken we will all make fewer errors in our diagnosis and will reap more enjoyment in the treatment of our patients.

DISCUSSION.

Dr. L. J. Clark (Vicksburg): I enjoyed very much Doctor Little's paper. I am sure that there is nothing I could add. However, I would like to stress several points he brought out that I have found of the utmost importance in taking the history of individuals.

In the conditions that seem to be of a gastro-intestinal nature, it seems to me that it is very important that details should be brought out as to the character and quantity of food eaten, and the time for meals; whether or not they drink or eat between meals; also the rate of eating, particularly certain individuals that have to answer the phone at meal time,—such questions as that should always be answered. Also, the mode of living and social environment should be developed, as well as the amount of exercise they take, and the amount of rest; the patient's mental attitude towards his occupation should be ascertained.

Again, I want to stress, as Doctor Parks of Baltimore says, the orderly occurrence of events. I find this is of the utmost importance in a great many cases.

Lastly, I want to agree with Doctor Walker of Washington that we should endeavor to classify the patients into certain psychological groups. He finds certain groups are inclined to have certain diseases.

Dr. C. M. Speck (New Albany): I enjoyed Doctor Little's paper very much. I don't think there is a subject in medicine that is more important than history taking. In fact, very few of us pay as much attention to the history of cases as we should. In the case of very many diseases diagnosis can almost be made by the history alone. We take for instance duodenal ulcer. Hunger pain coming on two to four hours after eating with intermissions in occurrence is almost diagnostic. Very few of us, as I said, take histories as we should. A great many doctors who are well educated and well trained pay very little attention to history taking and there is not an aid to diagnosis as important as history taking. I thank you.

Dr. Randolph Lyons (New Orleans): Mr. Chairman, ladies and gentlemen: I think it is very refreshing to hear a paper on history taking now and then. We all, I think, appreciate the value and importance of a careful, searching history taking, but the majority of us, I think, are rather apt to neglect it, particularly now-a-days with the multitudinous number of tests we have. We are very apt to skimp the history taking and go on and do something else, when, as a matter of fact, a careful history might afford a diagnosis.

As has been mentioned, there is nothing more important than history. In nervous conditions the history is almost the entire thing. It is very important in many gastro-intestinal conditions. Many gastro-intestinal conditions we come across are functional in character and some of them can almost be diagnosed by the nervous make up of the individual.

I think it is good for all of us to have now and then a paper of this kind to stimulate interest in the good old method of careful history taking.

Dr. Little (clasing): I just want to thank the doctors for discussing this paper and especially Doctor Lyons because I remember sitting at the side of the bed in many cases in Tulane and having Doctor Lyons to tell me to do this and do that. Thank you very much, gentlemen.

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THE SOUTHERN MEDICAL.

Last month in an editorial, we called attention to the meeting of the Southern Medical Association, which will be held in New Orleans the third week of this month. We wish to reiterate and repeat what was said in this editorial, and with all earnestness and seriousness, we want to urge the members of the Louisiana State and Mississippi State Medical Societies to come to this fall meeting. Last month we announced that splendid scientific programs are being prepared by the chairman of the different sections. We might add that a number of clinics, a partial program of which appeared in the last month's issue of this Journal, have also been arranged, and we want to add furthermore that the social features of this meeting will not be neglected. Ample opportunity will be given to the man who is interested in sport to partake of that particular variety in which he may be interested. For the more trivial minded, banquets and other indoor occupations have been provided, and for the ladies a magnificent series of rides, teas, visits through the French Quarter and other features have been fixed up by the splendid Committee on Arrangements of the Ladies' Auxiliary of the Orleans Parish Medical Society.

The scientific features of the Southern Medical Association transcend the social. The man who wishes to keep abreast of the times should attend meetings such as this. The most recent advances of medicine and surgery, and the various specialties will be presented by those who are qualified to know and to speak. Again we urge the members of the two State Medical Societies to whom this Journal goes to join up now with the Southern Medical, if they have not already done so, or if they wish to postpone such action, at least to come as guests to the meeting and see everything that this second largest medical organization in the country can show them in the way of scientific medicine, not to speak of the distinctly less important social entertainments which are not to be stressed but which are always welcome.

PELLEGRA.

For the weeks ending June 20 to July 11, inclusive, a total of four weeks, there was reported in the State of Louisiana 252 cases of pellegra. The week ending July 18 saw the peak of cases reported to the State Board of Health when 325 cases were listed. Undoubtedly, of course, a great many active but mild cases prevalent at this same time were not reported. Surveys

have been made at various times and at various localities indicating that not more than from 10 to 15 per cent of cases of pellegra come to the attention of the doctor. Generally speaking, it is only the aggravated cases that seek medical attention. These data are presented merely with the idea of indicating how widespread and extensive is this disease. It is true, as Sydenstricker has shown, there have been known increases throughout the United States following such periods of economic depression as occurred in 1915, 1921 and 1930. This observation is undoubtedly applicable to the increase of cases in the present depressed year of 1931.

It is interesting to observe that here is a disease which for a period of six weeks led all other reportable diseases in the State of Louisiana, and yet prior to 1907 was not recognized in this country. Osler's great textbook went through the first seven editions with the mere statement that the disease is not observed in the United States. Other contemporaneous textbooks made no mention of it. Yet there can be little doubt that the disease was prevalent in the South before the period of 1907-1908. Wheeler* writes that evidence has accumulated which indicates that the disease, while present in the United States, was not recognized prior to this time, and that the principle argument against the existence of pellegra in North America before it was generally recognized in 1907-1908 lies in the fact that it was not so recognized. Questionnaires sent out to old practicing physicians have shown that they had seen cases of pellegra before 1907, but did not recognize what the disease was. The fact that it was present in this country before this time would indicate that the infectious theory of the disease can not be substantiated by the epidemiologic observation that 1907 marked the occurrence of an epidemic of a disease which had not reached the shores of the United States before this time.

In conjunction with the high pellegra morbidity rate it is interesting to speculate upon the changes that have occurred in the last two and three decades in the practice of medicine. Aside from changes in methods of practice, one of the interesting developments has been the increase in some disease previously unknown, and the decrease in other diseases which formed the bulk of the physician's practice. Typhoid fever has been relatively accurately controlled, and the contagious diseases of childhood are less prevalent than they used to be, but pellegra steps in to take the place of typhoid fever, and poliomyelitis, in some sections of the country at least, far surmounts all of the reportable contagious diseases in frequency at certain times in the year.

*Wheeler, G. A.: A Note on the History of Pellagra in the United States, U. S. Public Health Reports, 46:2223, 1931.

THE PREVALENCE OF ANTERIOR POLIOMYELITIS.

This past summer has witnessed a widespread and extensive epidemic of poliomyelitis in several New England States, the Middle Atlantic, and East-North-Central States. The extent and severity of this epidemic may be adjudged by the fact that the week ending August 29, 1931 in 46 states there was reported 1,319 cases of poliomyelitis, which over-topped all other reportable diseases by a very large majority. The epidemic has been apparently confined to the group of states mentioned above. Certain of the states in these groups seem to be particularly unfortunate in the instance of poliomyelitis. For the first week in September, there was reported in Massachusetts 144 cases, in Connecticut 162, whereas Maine and New Hampshire only had 11 cases. During this same week New York reported 540 cases, while Pennsylvania had but 20. Missouri in this same period reported 107 cases, Ohio 6, and Indiana 4. Minnesota had 50 cases among

the West and Northcentral States, and Kansas but one.

So far, the South Atlantic States have been fortunately free from poliomyelitis in epidemic proportion. Louisiana and Mississippi have had no more than the usual number of cases that may be expected at this time of the year; in fact, only three cases were reported during the week the largest number of cases occurred in the North. This is most gratifying, for of all the infectious diseases that occasionally break out in epidemics from time to time, there is none more feared nor more dreaded than poliomyelitis. Knowledge of the way the disease is disseminted, of the cause of the disease, and of any treatment that is effective, is virtually nil. It is only when we have scientific knowledge of a disease that it can be conquered. Perhaps the dreaded poliomyelitis with its high mortality rate and its devastating morbidity will be conquered in the near future, but until more is known as to the cause of the disease this hope will be nothing more than a much to be desired accomplishment.

HOSPITAL STAFF TRANSACTIONS

GEORGE C. HIXON MEMORIAL HOSPITAL.

Staff Meeting September 25, 1931.

Abstract.—An Unusual Case of Appendicitis.—Dr. A. M. McCarthy.

Patient—A white male, unmarried student, aged 16 years, was admitted to the hospital August 12, 1931, 9:30 P. M.

Chief Complaint.—Abdominal pain, diarrhea, nausea, vomiting, and fever.

History of Chief Complaint.—He was awakened from sleep at 4 A. M. by abdominal cramps and a desire to defecate. The bowels moved five times in the next four hours. The stools were fluid and evacuation relieved the cramps. About 5 A. M. he became nauseated, vomited, and continued to vomit throughout the day when he would take anything into stomach. At 10 A. M. he showed evidence of fever, and shortly after noon his temperature, taken by the family physician, was 103° F. At 3 P. M. he had a hard shaking chill, which lasted twenty minutes, and at 4 P. M. his temperature was 104.6° F. The abdominal pains which at first were paroxysmal, gradually became more persistent, and upon admission to the hospital the site of maximum intensity was in the epigastrium. Three weeks previous he had had an attack of indigestion and several loose stools.

Physical Examination on Admission: The patient had morphine and antipyretic treatment by the family physician and appeared fairly comfortable. He was well developed and well nourished. Temperature was 99.8° F., pulse 112, respiration 22, blood pressure 118/70. The abdomen was flat in appearance. There was generalized tenderness, slightly accentuated in the epigastrium and right hypochondrium and flank. Pressure over McBurney's point elicited pain, but not as intense as did pressure over the upper abdomen. Both recti muscles were more spastic than normal, but there was no localized rigidity. Physical examination was otherwise negative.

Laboratory Findings on Admission.—Leukocytes 32,500; neutrophiles 89 per cent. Urinalysis negative.

Clinical Course.—At 3:15 A. M., 8, 13, '31 (approximately six hours after admission), patient had another chill followed by temperature of 103.8° F., and at 8 A. M. temperature was 97.6° F. Subsequent preoperative temperature did not go above 100° F. The preoperative pulse curve declined sharply with the temperature and did not go above 80. The patient continued to complain of abdominal pain which remained most intense in epigastrium, right hypochondrium and flank. He complained of severe headache during the second day and vomited once. Enemas produced good elimination from the lower bowel. The physical findings remained the same except for a gradual increase of tenderness in the right flank and an increase in the spasticity of the upper half of both recti muscles. Twelve hours after admission the leukocyte count dropped to 28,000 and the neutrophiles increased to 92 per cent. Eighteen hours after admission leukocytes were 25,000 with 98 per cent neutrophiles. The urine remained negative.

Diagnosis.—After 36-hours of observation it became evident that we were dealing with a surgical abdomen and that exploration was imperative. The diagnosis in my mind was still obscure. Acute appendicitis, because it is the commonest acute surgical disease in a patient of this age, was given

preference, but I could not help but feel suspicious of the upper abdomen, and the possibility of a perforated acute gastric or duodonal ulcer.

Treatment.—Sodium amytal analgesia, and light ether anesthesia. Exploration through a low paramedian incision. The appendix was found retrocecal lying postero-lateral to the cecum and ascending colon. It was completely gangrenous but no abscess had formed. It was amputated, stump inverted and abdomen closed without drainage.

Convalesence.—Uneventful except for a minor postoperative infection of the incision. The wound was completely healed and patient discharged on fourteenth day.

Dr. C. E. Baldree, Jr.—The above case for first 24-hours was a typical case of food poisoning. The nausea, vomiting, diarrhea and history were typical. In fact we thought we were dealing with a case of acute food poisoning. However, the epigastric discomfort which continued was not at all in keeping with cases of this nature. The rigidity of both recti muscles which continued was an indication of some surgical condition. I believe this patient had an acute enteritis which in the beginning was general throughout the gastro-intestinal canal and the appendix was involved in the process. The condition remaining in gastro-intestinal tract subsided and the inflammation continued on in the appendix. The chills and fever of 104° F., were certainly unusual for appendicitis. However, we felt we were dealing with a surgical condition and waited as long as possible before operation was advised. Cases of this type are certainly misleading and account for the continued high mortality from appendicitis if left unoperated upon.

Dr. J. L. Hasie.—The study of this case was very interesting and instructive. The stormy acute onset with nausea, vomiting, diarrhea, chill and high fever, plus the generalized abdominal tenderness and laboratory findings seemed to point to either an acute food poisoning or some acute intestinal allergic condition. The history of a recent previous attack seemed to point to intestinal allergy probably due to some specific article of diet, but careful questioning in regard to this point failed to bring to light any offending article of diet.

As regards botulism or other acute food poisoning, there was no history of the patient eating any canned foods, olives or other articles foreign to his usual diet. Therefore, the decision was made to treat the case conservatively and observe him closely for any changes which might occur.

The swift change of the picture in the succeeding twenty-four hours from that of food poisoning or allergy to one of a surgical condition of the upper abdomen was very unusual, and with this change the decision was made to give the case further study. Within twelve hours after this decision, the picture presented was that of an acute surgical abdomen. The exact location of the pathology was in doubt but as Dr. McCarthy has stated, we considered the appendix the probable offender and were very gratified to find our judgment vindicated.

Cases of this type tax anyone's diagnostic ability and in most instances conservative treatment and close observation will usually make clear the obscurity of such types of abdominal pathology. The chief danger to the patient lies in waiting too long to open the abdomen, but a careful, able surgeon renders this danger negligible.

Conclusion by Dr. McCarthy.—To me, this case has been a valuable lesson on acute appendicitis, because it emphasizes how varied can be the history, symptoms, physical and laboratory findings associated with this disease. It is this variation from the usual text book picture that makes acute appendicitis such a dangerous and often disastrous disease. Such a lesson as we have just experienced brings up the old question; "Is it not better to operate early on suspicious evidence and forego the possibility of removing a normal appendix, than to procrastinate for a positive diagnosis and run the risk of perforation?" This rule has many advocates, and perhaps their mortality is lower than they who adopt the rule of watchful waiting. Because of my aversion to unnecessary surgery, I am inclined to follow the more conservative rule when the patient is in a hospital with facilities to operate within the hour of your decision. I will admit in this case that the pathology had advanced to a dangerous stage, and feel very grateful that we were awarded a cure.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL.

Staff Meeting October 10, 1931.

Abstract.—Spontaneous Pneumothorax.—Dr. L. J. Clark.

Patient.—A white unmarried male, aged 24 years, civil engineer by occupation, came to clinic on August 10, 1931.

Chief Complaint.—Pain in chest, indigestion. Patient stated the condition began as a cold, later having precordial pain and dysponea.

Past History and Family History.—Not of interest.

Physical Examination.—Temperature 98° F; pulse 88; few rales in upper left chest.

The patient was instructed to go to bed and to keep quiet; ordinary medicines were given.

The patient returned seventeen days later. The pain was worse about the ensiform cartilage, extending up the sternum and to the left shoulder and arm. There was painful and difficult breathing. The movements of the chest were painful. His appetite was good; food agreed well; bowels were slightly constipated. There was no bladder trouble. Examination at this time showed his heart definitely displaced to the right; heart sounds distant on the left and heard better on the right. Left chest was somewhat resonant with distant breath sounds.

Fluoroscopic examination of the chest showed a marked displacement of the heart to right but not a transposition. The lungs were clear. There was a small amount of fluid at the left base with a definite fluid level. A skiagraph of chest showed a definite left pneumothorax with small amount of fluid at the base.

Blood.—Leukocytes, 9,400; small lymphocytes 32 per cent, large lymphocytes 4 per cent, large mononuclears 5 per cent, polymorphonuclear neutrophiles 56 per cent, polymorphonuclear eosinophiles 3 per cent; no malaria; erythrocytes 4,192,000; hemoglobin 87 per cent; Wassermann, Kahn, and Kline and Young tests negative.

Urine showed nothing remarkable.

Patient was from out of town and returned home for his physician to give treatment.

Discussion.—Spontaneous pneumothorax occurs most often between the age of fifteen and forty-five; according to Mikalsky in 80 per cent of cases. Males are affected more often than females in proportion of four to one. This is explained on the basis of increased muscular effort in the male. It is said to occur with equal frequency on both sides of the chest.

Spontaneous pneumothorax may be multilocular or unilocular, depending on pleural limitation; partial or total; unilateral or bilateral; simple or complicated with effusion; and may be recurrent. Only about fifteen bilateral cases have been reported in the literature. Death does not necessarily ensue as might be expected as four of these recovered.

Spontaneous pneumothorax may be classified as of the closed type, meaning a sealing up of the pleural cavity; of the open type, if a free communication exists between the pleura and the pulmonary fistula; or of the alveolar type, if a check valve is developed. The various types may sometimes be differentiated by obtaining the manometric pressure.

Pulmonary tuberculosis is the most common cause of spontaneous pneumothorax. Causes are pneumonia, empyema, gangrene, rupture of lung from bronchiectasis, pulmonary abscess, infarction, paracentesis, perforation from an adjacent air containing organ, and emphysema, usually associated with asthma. Certain cases occur in which the cause cannot be found.

No tuberculosis was demonstrated in this case. The possibility is that he had a bronchitis associated with pleurisy which resulted in the spontaneous pneumothorax.

VICKSBURG SANITARIUM AND CRAWFORD STREET HOSPITAL.

Staff Meeting October 10, 1931.

Abstract.—Repair of Median Nerve Following Injury.—Dr. J. A. K. Birchett, Jr.

Patient.—A colored male, hotel porter, aged 29 years.

Chief Complaint.—Numbness in thumb and first and second fingers of right hand and pain in right arm.

History of Present Complaint.—Three weeks ago, while scuffling with a fellow worker, an ice pick penetrated the right forearm on the anterior surface. After the injury there was burning and tingling of the hand and some slight bleeding from the wound. The wound was dressed and in a few days was healed, but there was extreme pain when scar was put under pressure and a sensation of needles in the arm. There was some muscle stiffness.

Past History.—No serious illnesses; no operations; denies venereal disease; general health good.

Physical Examination.—General examination was essentially negative. The right arm on examination showed a small contracted scar in the middle third on the anterior surface. There was pain when the scar was manipulated; some adherence of tendons to the scar. The ventral surface of the thenar eminence, the outer third of hand and the first and second fingers had no sensation of pain or temperature.

Laboratory examinations were essentially negative.

Procedure.—With the evidence of injury to the median nerve, surgical interference was suggested and accepted by patient. Under general anaesthesia, a longitudinal incision four inches long was made through the scar. The muscles and tendons were freed from scar tissue which had developed in the tract of the stab wound. This scar led to the deep muscles after separating the superficial tendons, and the nerve was exposed.

It was completely severed with ragged ends. The nerve was freshened by cutting at right angle and the nerve stretched slightly to facilitate approximation. Suturing was done by placing interrupted sutures around the nerve. The nerve

was replaced in its bed and the wound closed and dressed with the hand in flexion to take strain off of nerve.

Subsequence.—Healing by first intention. As yet there has been only slight improvement in sensation but the pain in scar has been relieved. It will take three to six months for nerve regeneration to occur.

FRENCH HOSPITAL.

A regular meeting of the French Hospital Staff was called to order Friday, September 25, 1931, Dr. M. J. Lyons, presiding. Those present were: Drs. G. C. Anderson, J. W. Atkinson, C. J. Brown, C. L. Cox, J. R. Daboval, E. B. Faget, F. Gallo, P. Graffagnino, A. V. Friedrichs, W. H. Harris, F. Loria, M. J. Lyons, S. C. Lyons, L. J. Menville, M. O. Miller, F. A. Overbay, F. J. Sicomo, D. N. Silvermann and W. R. Strange.

The report of deaths and discharges for the month of August was read by the secretary. A case of abscess of liver and one of cellulitis and septicemia were opened to general discussion.

Dr. Graffagnino presented a paper on "The Interruptions of Pregnancy." He divided pregnancy into two periods:—1. Before viability or before the twenty-eighth week, and 2. After viability or after the twenty-eighth week.

The indications for interrupting pregnancy before viability are:—

1. As a direct means to save the mother's life.

2. To do away with conditions that may threaten her life.

3. To avoid certain dangers that may supervene as leukemia or chronic tuberculosis.

The method for interrupting pregnancy before the fourth month are dilatation of the cervical canal, separation of ovum and insertion of pack. The contents of the uterus usually come away with the pack. After the fourth month if haste is required a vaginal hysterotomy may be done.

The indications for interrupting pregnancy after viability are:—toxemia, disporportion of pelvis, placenta previa or dead fetus. The best method is that procedure which not only imitates labor but must be the safest plan for the mother and child. Some of the methods are:

1. Puncturing the membranes—this is uncertain and only 40 per cent successful.

2. Bougies or catheters—this is safest and method of choice, successful 75 to 80 per cent of cases, labor sets in 8 hours after.

3. Hydrostatic bag—used to dilate the cervix and initiate labor. This method is successful in 95 per cent of the cases, labor sets in 6 hours after and anesthetic is necessary.

However the complications in the above methods are hemorrhage, sepsis, laceration of cervix, prolapse of cord, also the morbidity and mortality is high.

The medical methods to induce labor are:—

1. Mathieu gives quinine, castor oil and pituitrin. The first attempt may not be successful but after the second or third labor sets in in 90 per cent of cases.

2. Reiss uses quinine, castor oil, pituitrin and stripping of membranes.

Dr. Graffagnino stressed the point that the decision to interfere should be based entirely on objective signs and clinical findings; more over, it should never be done without consultations with another physician who assumes his share of the risk and responsibility.

There being no further business the meeting adjourned.

C. J. Brown, M. D.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR.

November 2. Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

November 6. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

November 6. Physiology Seminar, Tulane Medical School, 5 P. M.

November 9. ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

November 11. Touro Infirmary Staff, 8 P. M.

November 13. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

November 13. Physiology Seminar, Tulane Medical School, 5 P. M.

November 13. French Hospital Staff, 8 P. M.

November 16. Hotel Dieu Staff, 8 P. M.

November 17. Baptist Hospital Staff, 8 P. M.

November 17. Charity Hospital Medical Section, 8 P. M.

November 18. Charity Hospital Surgical Section, 8 P. M.

November 18. First day, Southern Medical Association meeting.

November 19—Eye, Ear, Nose and Throat Club, 8 P. M.

November 19. New Orleans Hospital Council, Mercy Hospital, 7:30 P. M.

November 20. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

November 20. I. C. R. R. Hospital, 12 Noon.

November 20. Physiology Seminar, Tulane Medical School, 5 P. M.

November 23. ORLEANS PARISH MEDICAL SOCIETY, 8 P. M. Election of Delegates to Louisiana State Medical Society and Nominations for Officers, 1932.

November 27—Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

November 27—Physiology Seminar, Tulane Medical School, 5 P. M.

During the month of October, besides the regular meeting of the Board of Directors, the Society held a joint quarterly executive and Scientific Meeting and the sixth Stanford E. Chaillé Memorial Oration.

At the joint quarterly executive and scientific meeting the following program was presented:

Chaulmoogra Oil in Eye, Ear, Nose and Throat. By: .....Dr. T. J. Dimitry

Discussed by Drs. Homer Dupuy, Chas. A. Bahn, Spencer B. McNair, Sam Cohen and closed by Dr. Dimitry.

Some Clinical Concepts of Heart Failure. By:.....Dr. Sidney M. Copland

Discussed by Drs. I. I. Lemann, Chaille Jamison and closed by Dr. Copland.

Reports of the officers and special standing committees of the Society for the Third Quarter were read. The following resolutions were adopted:

It is proper that a fitting record be made of the sorrow of the Orleans Parish Medical Society at the sudden death on August 17, 1931, of Dr. Aristides Agramonte.

This Society had honored itself in electing him to honorary membership in recognition of his labors as one of the devoted band of four, Reed, Carroll, Agramonte, and the martyr, Lazear. To their brilliant demonstration of the mosquito transmission of yellow fever, New Orleans owes its freedom from the pestilence that in the past century so frequently ravaged it. To this discovery, too, our city owes much of its prosperity and progress, for through it we have been freed from unnecessary and harassing restriction of our commerce. These heroes of the American Commission on Yellow Fever in Cuba deserve our eternal gratitude. There are no figures in our long history to whom we owe more.

Dr. Agramonte was for a long period professor in the University of Havana, where he rendered great service to the medical profession of Cuba. His acceptance of the professorship of Tropical Medicine in the Louisiana State University Medical School, and his removal to New Orleans only a few weeks before his death, had led to the anticipation by the members of the Orleans Parish Medical Society of many years of pleasant association.

BE IT RESOLVED, That a page of the minutes be devoted to this tribute to the memory of Dr. Agramonte.

BE IT FURTHER RESOLVED, That a copy of these resolutions be sent to the family with an expression of the Society's sincere sympathy and condolence.

Whereas the Orleans Parish Medical Society has learned with sorrow of the death of Dr. Jules J. Sarrazin, associate member, on September 14, 1931,

Whereas Dr. Sarrazin, throughout his long career, had been an outstanding figure in the dental profession of this City, and has endeared himself to his colleagues and associates,

BE IT RESOLVED, That this Society tender to his bereaved family this expression of its admiration of his sterling qualities and of its regret at his untimely passing.

BE IT FURTHER RESOLVED, That these resolutions be spread upon the minutes as a tribute to the memory of Dr. Sarrazin.

The sixth Stanford E. Chaille Memorial Oration was held October 26. Dr. Walter E. Sistrunk, Jr., of Dallas, Texas, was the orator and presented a most interesting paper on "Chronic Streptococcic Infections of the Female Genital Tract." A clinical and experimental study of their effect upon the health of women.

Plans for the coming meeting of the Southern Medical Association are being completed as the meeting is nearing. The committees have been working diligently in order to get their programs into the office of the Southern Medical Association for the coming issue of the Journal. The meeting will be a most interesting one from every standpoint.

The following doctors were elected to membership:

Active Membership: Drs. Herbert E. Cannon, Harry B. Levey, Henry G. Butker, Jacob O. Hoth, Morris Shushan and J. Thornwell Witherspoon.

Interne Membership: Drs. Pascal L. Danna, Harrie A. Patterson and Thomas R. Ramsay.

The following applications for Interne Membership are posted:

Drs. Nancy D. Campbell, Jeanne Cecile Roeling and Carroll F. Gelbke.

We have learned that Dr. Raymond R. Roberts is now associated with Dr. Maud Loeber.

TREASURER'S REPORT.

Actual book balance 8/31/31	$ 885.52
Credits	1,016.02
	$1,901.54
Expenditures	$ 485.66
Actual book balance 9/30/31	$1,415.88

LIBRARIAN'S REPORT

Three hundred and sixty-two books have been added to the library during the vacation months, July-September. Of these 188 were received by gift, 95 by binding, 54 by purchase and 25 from the New Orleans Medical and Surgical Journal. A notation of titles of recent date is appended herewith.

A notation of some of the reference questions on which we furnished material was kept during August and September. The following are chosen from this list as evidence of the diversity of interests which we have served:

Industrial lead poisoning.

Dysachondroplasia.

Gumma of the bladder.

Tests for arsenic.

Diagnosis for dementia praecox.

Hernia of the pregnant uterus.

Use of bats in the eradication of mosquitoes.

Fibroids of the ovaries.

Urea in urine.

Intravenous injections of drugs in the treatment of psoriasis.

Physical requirements for work in compressed air—Prevention of caisson disease.

Sanitation and prevention of disease in the tropics.

Basis and development of personality.

Ainhum.

This has been the busiest summer we have ever had in the Library. Study and reference work has continued steadily throughout the hot weather. Three of the staffs of the two libraries have been on duty at all times and have been kept busy answering the calls of our patrons.

NEW BOOKS.

July-September, 1931.

Crossen—Operative gynecology. 1930.

Trelease & Fraser — Preparation of scientific papers. 1930.

Rockwell—Streptococcic Blood Stream Infections. 1930.

Halliburton—Handbook of Physiology. 1930.

Loewenberg—Diagnostic Methods and Interpretation of Internal Medicine. 1931.

Gager—Hypertension. 1930.

McLester—Nutrition and Diet in Health and Disease. 1931.

International Medical Annual. 1931.

Beaumont—Recent Advances in Medicine. 1931.

Snow—Textbook of Physical Therapy. 1931.

McBride—Crippled Children. 1931.

Rowntree—Clinical Study of Addison's Disease. 1931.

Miller—Introduction to Gynecology. 1931.

White—Heart Disease. 1931.

Piette—Textbook of Histology. 1931.

Rea—Diet Book. 1931.

Walsheid—Abdomino-pelvic Diagnosis in Women. 1931.

Caufield—Infant Welfare Movement in the 18th Century. 1931.

Alexander—Criminal, the Judge and the Public. 1931.

Roberts—Eye, Ear, Nose and Throat for Nurses. 1931.

Buie—Proctoscopic Examination and Treatment of Hemorrhoids. 1931.

Pearl—Introduction to Medical Biometry and Statistics. 1930.

Cathcart—Treatment of Chronic Deafness. 1931.

Thomson—Manual of Surgery. 1931.

Petty—Diabetes. 1931.

American Medical Association—Directory. 1931.

Budd—Typhoid Fever. 1931.

Walters—Obstructive Jaundice. 1930.

Chase—Physical Requirements for Commercial Flyers. 1930.

U. S. Army—Manual of Splints and Appliances. 1931.

American College of Surgeons—Yearbook 1929.

American Society for Control of Cancer—Essential Facts about Cancer. 1924.

American Academy of Ophthalmology and Otolaryngology—Transactions 1921-22, 1924-25.

American Medical Association—Council on Pharmacy and Chemistry. Reprints. 1930.

American Medical Association—Congress on Medical Education. 1931.

American Medical Association—Therapeutic Research Council Reports. 1930.

American Medical Association—New and Non-Official Remedies. 1930-31.

Southern Surgical Association Transactions. 1930-31.

Central States Pediatric Society—Transactions. 1930.

H. THEODORE SIMON, M. D.,
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

AMERICAN MEDICINE—MEDICAL ECONOMICS.*

In bringing to the front the question of Medical Economics, I would have the profession distinctly understand that I have no thought or wish or scheme for devising means and ways of building up the individual doctor's bank account and his financial standard per se.

The question before the American Medical Profession today and more vitally the American public in general, is whether our profession shall continue to operate as a great system, pulsating with a human heart and the individual doctor as the unit, spurred on by personal initiative and ambition, or shall we have on the other hand, a cold blooded machinery in its stead, with the individual doctor acting merely as a cog in the wheel, attempting to operate as directed by "higher ups," with none of the personal freedom, initiative and stimulous which has characterized our activities in the past.

The former is a principle peculiar to America and has made us great: the latter is is foreign to our very nature and confronts us only through the misguided efforts of misinformed influences.

The history of medicine dates back to the almost forgotten past, into the dark recesses of Egyptian, Hindu, Chinese and Grecian lore; in fact, into the era of Mythology when Apollo reigned on Mt. Olympus and sent his mythical son, Aesculapius, to earth to serve the sick and afflicted.

No profession or trade, no avocation or vocation has such ancient history. None of the religions of man, date back so far, only the belief in a God parallels, or antedates the plans of man for the cure of the sick.

Christ came to earth and cured the spiritually and physically ill: his disciples laid aside their fishing nets and went abroad teaching the doctrines of his faith, with no thought of world remuneration. Yet, in this modern day we see, after only 2000 years, his modern disciples and those of other faiths, budgeted for, by those communities whom they serve, and no one censures these godly men when we see them move on to larger and more remunerative fields. This is as it should be, though their budgets in most cases are niggardly small.

Tracing the history of all the trades and professions of man, from their earliest inception to this present practical day, we find the imprint of evolution in bold relief, scientifically, practically and economically.

Yet in the practice of the Aesculapean Art today, we find still clinging with a death like grip, certain traditional teachings, influences and impracticalities born to us at the birth of history. The practice of medicine has progressed to its present high standard, because of her traditions and we can likewise truthfully say in spite of some of her traditions.

And what is the tradition of medicine which has separated it from the other professions and makes it stand out as touched by the hand of God?

The teaching and practice of its members, of alleviating pain wherever found, but more especially in those unable to provide for themselves.

However, through extraneous and selfish influences, this tradition has been distorted, having it appear that we must serve any and all, with no thought of ones' self, those dependent upon us, or the future of our profession.

I hold it the duty of all men to so conduct themselves and the business in which they may be engaged, in such manner that their business may increase in scope and become more useful to society in the future. The practice of medicine is our job and it becomes us to so conduct it that it shall become more useful to humanity in the future.

I know of no machinery, established in this country, which will provide ways and means for maintaining the doctor at a high standard of scientific development and equipment, excepting the individual efforts of the doctor himself. Unless these individual efforts produce the ways and means, the individual doctor suffers deterioration, and when he deteriorates, general medicine deteriorates and the public, in the end, must feel the effect.

Modern civilization, if such it can be called, and modern human nature familiar to us all, tends to shift responsibilities to the shoulders of others. Slowly and by degrees, as the complexity of society has increased, pressure from without our ranks and weakness from within, has enabled selfish individuals and organizations to amend our original tradition of free service to the weak, to charity service to the strong.

Tradition has been definied as the process by which the teachings of one generation, are fixed

*An address delivered before the Sixth District Medical Society, Jackson, La., October 14, 1931.

upon those of the future. Applied to human activities, this practice would result in stasis and no progress.

We are living in a changing world and with or without our will, we must change with it.

The audacity with which the individual and the many organized individuals demand the doctors' service regardless, must be met with the calm and dignified request for information as to where lies the responsibility.

There is no sin in the eyes of God or just men, in refusing to accept as our responsibility that which rightfully rests upon the shoulders of others. The practice of our profession is our business and only means of livelihood, and society, however small the community, must come to learn that the care of the indigent sick is just as much their duty as is the care of the indigent hungry. To shift the whole burden to the shoulders of a small group of individuals, is manifestly unfair.

The doctor today, pays the State of Louisiana a special tax for the privilege of practicing his profession, just as the merchant does for the privilege of selling his goods; he writes his check for the Community Charity fund, he donates to the Salvation Army fund, the Red Cross and other charity demands, just as other good citizens, and yet the community demands that he alone shoulder the burden of providing medical care for the indigent.

Where is the community, or the individual who would be so unfair as to demand of their local merchants that they assume the expense of feeding and clothing the indigent in their midst?

It is not done because distorted tradition has not so directed. When communities learn and act upon the principle that the care of the indigent, whether hungry or sick, is their problem, many of the doctor's problems will be solved and many classed as indigent, will get a reclassification.

Coming in from all sides under various guises and disguises, certain activities are lopping off the sources of the doctors' income, while we sit idly by playing the faux pas and living on distorted tradition.

Many medical men will hold up their hands in horror when the question of finances is mentioned in a medical convention, though their first thought usually, is the fee in actual practice. I respect their opinions and grant them their right to act and practice as consistently and inconsistently as they choose, but where is the evil of discussing finances?

Our State and various Parish Associations in their constitution and by-laws, provide among other things, that the material interests of the doctor shall be cared for. The Great Teacher of man discussed money in many of His parables, urged thrift, the practice of economy, and in no instance did He say other than the love of money was an evil.

It is not my purpose, to attempt other than to put you on your guard in the matter of the present medical economic trend.

The State Board of Health, I am informed by its President, does not desire or intend to enter the practice of curative medicine, but realizes the field of preventive medicine is the activity for which it was created. However, in many instances, over-zealous health units are stepping out into active competition with the local profession. I have heard many complaints of this kind and in most instances, it has been shown that members of the local profession, by their assistance, have made these programs possible.

Sixty-two per cent of the hospital beds of the United States today, are charity, or semi-charity. Seventy-one per cent of the sick today are treated as charity, or semi-charity, and the number is mounting. Tuberculous Clinics, Children's Clinics, Prenatal Care Clinics, Venereal Clinics, Out-door Institution Clinics, unrestrained, are operated by the doctors on a charity basis in direct competition with themselves, all because of distorted tradition.

The City of Shreveport, and I use this city only as an example, is using our tax money to provide medical care for people who are well able to pay for medical service. Under the guise of Medical Supervision of school children, medical service is rendered gratis where parents are well able to pay.

Neither the State, its subdivisions or municipalities have any right to enter the field of curative medicine, except among its indigent, and I hold here that it is the State's duty and in no sense, the medical profession's.

Scattered over our State from one end to the other, are corporations actively engaged in the practice of medicine, yet the State Medical Practice Act provides that only an individual who can stand certain medical examinations shall be permitted to practice medicine.

The Supreme Court of California has recently decided that corporations cannot practice medicine in that state and their corporations and methods of practicing medicine over there, are the same as is going on in Louisiana.

The Supreme Court of Kansas has recently decided that a corporation cannot practice dentistry in that state and the Supreme Court of Illinois, that a corporation cannot practice law in their state. Imagine if you can, a corporation standing an examination and receiving a certificate to practice medicine.

The Workmen's Compensation Act of this state, drawn ostensibly in the interest of the working man, is operated with an eye for dividends for out of state corporations who grind the doctor down in his charges and usually contract with the cheapest that can be gotten. This lacks good business on their part; it shows poor business and lack of good sense on the part of the doctor.

The insurance companies have no legal right to practice medicine, neither any corporation in our state, as is being done, and a test of their right must come sooner or later. I have no knowledge of law and its intricate workings, but there is a broad principle underlying our legal structure, I am informed, which provides that no individual, or concern shall be permitted to do indirectly those things forbidden directly.

Thus we could continue ad infinitum, to cite instances of such nature. We could point to the action of our national government where spineless vote seeking Congressmen and Senators have yielded to pressure from certain influences in the American Legion and are now providing medical care to all members of that body, regardless of the fact that their illness has no connection with their service during the war.

We could point to the practice of that wonderful organization, the American Red Cross who during a devastation, go into a community and supply every need of the unfortunate, except his medical care, but expect the local profession to carry the load alone.

Thus by degrees, present conditions, practices and ideas have become established, and after all is said, what is to be done?

We cannot sit idly by, admitting that the problem is too big to be tackled, as I have heard certain men cringingly admit. The solution is simple, though of course somewhat difficult of application.

Organization and square dealing, one with the other, can accomplish relief from most of our ills.

Our Code of Ethics as handed down, will never be construed by an enlightened public as demanding certain present day practices and impositions. The public must be told and taught the facts. Distorted tradition must be brushed aside and the white flag "No Charge" must float aloft only when emergencies exist and our neighbor has shouldered his portion of the load.

S. C. Barrow, M. D.,
Shreveport, La.

BI-PARISH MEDICAL SOCIETY.

The East and West Feliciana Bi-Parish Medical Society met in the East Louisiana State Hospital as the guest of Dr. Glenn J. Smith and Staff. The scientific program consisted of two papers. First came the reading of a most excellent paper by Dr. S. E. Fields on "Some Acute Conditions in the Female Pelvis." Then came the reading of a most thorough and learned discourse on "Childhood Pulmonary Tuberculosis" by Dr. Cecil Lorio. Both papers were freely discussed by members present and a vote of thanks tendered Drs. Fields and Lorio. Drs. Fields, Lorio, Catchings and Guilbeau were elected honorary members of our Society. Dr. Glenn J. Smith and Staff were given our appreciation for their excellent entertainment during the meetings in 1931. Our next meeting will be in The Rist Hotel, Clinton, La., the first Wednesday in December, at 7:30 p. m.

J. B. Sewell, President,
E. M. Toler, Secretary.

SIXTH DISTRICT MEDICAL SOCIETY.

The Thirteenth Annual Fall meeting of the Sixth District Medical Society was held in the East Louisiana State Hospital at Jackson, Louisiana on Wednesday, October 14, 1931, opening at 10 a. m. sharp. The meeting was called to order by the President, Dr. F. F. Young, Covington, Louisiana, who gave a short address. The Invocation was delivered by Rev. R. P. Johnson of St. Francisville, La. This was followed by the orchestra, who played "America" wonderfully, especially when it is considered that all of the musicians were inmates of the State Institution and, as Dr. Smith explained, were, at times, dangerous and violent—had we not been told, no one would have thought so far to all appearances, they were just ordinary people, intent on doing their part well. Dr. Glenn Smith, in his usual affable and pleasing manner, gave the address of "Welcome." Then followed routine business of the meeting, during which a committee was appointed to draft resolution on the death of our lamented member, Dr. H. T. Nicolle. A telegram from the Secretary of Louisiana State Medical Society, Dr. P. T. Talbot, expressing regrets at not being able to attend our meeting and wishing us much success was read and received much applause. After this Hon. O. K. Allen was presented to the audience as the representative of Governor Long, who could not attend and gave us an interesting talk, telling us some of the insights of the workings of the Highway Department. The paper on "The Economical Trend in Medicine" by Dr. Sidney C. Barrow, President of the Louisiana State Medical Society, seemed to have met unanimous approval for a motion followed, which

passed unanimously, giving him a vote of thanks and approval of his views and pledging hearty support. The paper by Dr. C. S. Miller, Jr., of the East Louisiana State Hospital on "Psychiatry and the General Practitioner" was splendid from every viewpoint, showing that the writer is both a thinker and observer. It was capably discussed by Dr. Lea of Jackson, Dr. Roland Young of Covington and several others. "Roentgen-ray in Skin Diseases" was the title of a paper by Dr. Lester J. Williams, a finished scholar in his specialty and it was interesting to learn how many diseases of the skin yielded better to this scientific remedy than to drugs. It was discussed by Dr. C. S. Barrow in such a thoroughly scientific way that the speaker held the audience wrapped in attention. Dr. Lucius D. McGehee, of Hammond, who was presented to the audience as President of the Florida Parishes Medical Society and who was down for a paper on the "General Practitioner and Specialist" "fooled" the meeting by giving an off-hand but splendid talk on the subject. He portrayed and showed by examples the undying love and respect many of the clients developed for the family physician and how wonderful it was to get up some cold night to go forth and relieve pain to a suffering human and his talk was well received. The meeting then closed with a few words from Dr. Young, the President in praise of Dr. Smith and his staff as hosts, when on motion a rising vote of thanks was given them. Everybody then retired to the dining hall, where a splendid luncheon was served.

F. F. Young, Pres.

PROCEEDINGS OF THE EIGHTH DISTRICT MEDICAL SOCIETY.

A splendid and instructive meeting of the Eighth District Medical Society was held at Alexandria, La., on Wednesday, October 7, 1931, being called to order in the Bolton High School building by Dr. Carson Ried of Natchitoches, Vice-President. The minutes were read by the Secretary, Dr. J. H. Landrum of Alexandria, and approved.

Before the large assembly Dr. Willis D. Campbell of Memphis, Tennessee discussed "Un-united Fracture" in a most interesting manner, following which the members adjourned to the school cafeteria where Miss Ethel Spears, director, and her fine corps of assistants served them a delicious luncheon. For this enjoyable feature of the meeting the Society, through Dr. M. H. Foster of Alexandria, extended hearty thanks to Miss Spears.

Re-assembling in the place of meeting the members listened with deep interest to the discussion by Dr. Oscar W. Bethea of New Orleans of "Angina Pectoris"; who was followed by Dr. Daniel M. Silverman of New Orleans in an informative and much enjoyed discussion of "Gastro-Peptical Diseases."

Two most entertaining and enlightening films were presented by the Petrolagar Laboratories of Chicago, by use of projection lantern, one on appendicitis, and the other on diverticulum of the bladder.

At the conclusion of the program the meeting adjourned, to reconvene in October, 1932.

Dr. J. H. Landrum, Secretary.

POST-GRADUATE MEDICAL LECTURES.

The Journal has on file the "Green Book" issued by the Association of Lectures for Medical Post-Graduate Courses in Berlin. This little booklet gives full information of the facilities for post-graduate work that exists in Berlin at the present time. The lecturers, courses of lectures, the hours, where held, and all other information is contained in the book. Anyone interested in post-graduate European instruction is welcome to consult this booklet either in the office of the Journal, or, if they prefer, it will be sent to him.

NEWS NOTES.

Dr. Oscar Bethea addressed the North Mississippi Medical Society at a joint meeting held in conjunction with the Northeast Mississippi 13-County Medical Society at the University of Missippi. This meeting was held in honor of the University of Mississippi Medical School. The subject of Dr. Bethea's address was "The Diagnosis of Diseases of the Lung."

Assistant Surgeon Charles W. Folsom has been relieved from duty at New Orleans, Louisiana, and assigned to duty at Nashville, Tennessee, by Surgeon General Cummings of the United States Public Health Service.

Dr. John H. Musser and Dr. Alton Ochsner are on the program of the Inter-State Medical Society which convened in Milwaukee the week of October 19.

Dr. J. A. O'Hara, President of the Louisiana State Board of Health, in a circular letter calls attention to the advisability at the present time, when laboring materials are plentiful and cheap, of improving sanitary conditions of both homes and small towns throughout the State. He writes that many of the smaller towns are without water supplies and sewerage systems. Others have water supplies which are inadequate. Now is the time to improve water systems, sewerage systems, and means of collecting and disposing of garbage. City

and country homes should be improved where necessary from the point of view of the plumbing, lighting, and ventilation.

Dr. C. Jeff Miller and Dr. Alton Ochsner of New Orleans presented papers at the recent Clinical Session of the American College of Surgeons in New York.

Dr. Daniel N. Silverman, Councilor of the Second District, recently addressed the Third District Medical Society at Lafayette on "The Medical Management of Peptic Ulcer and Some of Its Complications." Dr. Silverman attended the reorganization meeting of the Eighth District Medical Society held October 7 at Alexandria, where he spoke on "Recent Observations in the Diagnosis and Treatment of Some Gastro-Intestinal Conditions."

Dr. Francis Carter Wood of Columbia University; Dr. Bryon Jackson of Scranton, Pa., and Dr. Leon J. Menville of New Orleans have been appointed to serve on a committee representing the Radiological Society of North America, for the coming American Congress of Radiology to be held in Chicago, 1933.

CIVIL SERVICE EXAMINATIONS.

The United States Civil Service Commission announces examinations for the position of Senior Medical Officer, $4,600 a year; Medical Officer, $3,800 a year; Associate Medical Officer, $3,200 a year. Applications for these examinations, grades of which will be rated entirely on education and training experience, must be filed either in the Custom House, New Orleans, Louisiana, or directly with the United States Civil Service Commission, Washington, D. C. These positions are to fill vacancies in the Veterans' Administration, United States Public Health Service, Indian Service, Panama Canal Service and Coast and Geodetic Survey.

HEALTH OF NEW ORLEANS.

The Bureau of Census, Division of Vital Statistics of the Department of Commerce, reports for the week ending September 12, 1931, 147 deaths in the City of New Orleans, giving a death rate of 16.4. The deaths were practically equally divided between the white and colored races. For the week ending September 19, there were only 130 deaths, 78 in the white and 52 in the colored, giving a death rate of 14.5. For the next week, the death rate had increased slightly, going up to 15.7 as a result of total of 141 deaths, 79 white and 62 colored. Seven of the white deaths were in children under one year of age, giving an infant mortality rate of 58. For the week ending October 3 the death rate was 11.4. There were 102 deaths in which 65 were white and 35 were the colored race. For the week ending October 10, the death rate was 13.5, considerably under the 16.9 death rate for the first 41 weeks of the year. Sixty-nine of these deaths were in the white race and 52 in the colored.

INFECTIOUS DISEASES OF LOUISIANA.

Dr. J. A. O'Hara, in collaboration with the United States Public Health Service, has issued weekly morbidity reports of Louisiana. The outstanding features of these reports for the last month are as follows: For the week ending September 19, there were reported 76 cases of syphilis, 52 cases of typhoid fever, 40 cases of gonorrhea, 23 of diphtheria, and 21 cases of pulmonary tuberculosis. Three cases of poliomyelitis were reported this week. For the week ending September 26, syphillis was again the most frequent of reportable diseases, typhoid fever had increased 4 cases, and there were 44 cases of diphtheria, 21 cases of pneumonia. The next week ending October 3, there were 41 cases of syphilis reported, 59 cases of typhoid fever, 22 cases of malaria, and 32 cases of diphtheria. One case of smallpox and one case of leprosy were also reported. The typhoid fever cases reported in largest numbers were from Assumption and Avoyelles Parishes, with 12 cases each. For the week ending October 10, 47 cases of syphilis were reported, 40 cases of typhoid fever, of which 19 came from the Parish of Orleans, most of them being imported. There were 55 cases of pulmonary tuberculosis, 22 of diphtheria, and 13 of pneumonia. For the week of October 17, diphtheria led all other reportable diseases, there being 33 reported. The incidence of typhoid fever had dropped slightly, and only 30 new cases appearing in the list of infectious diseses. There were also 22 cases of pulmonary tuberculosis reported, 17 cases of malaria, 16 cases of scarlet fever. One case of poliomyelitis and 3 of epidemic meningitis were also listed.

WOMAN'S AUXILIARY NEWS.

The South, Louisiana and New Orleans are looking forward eagerly to the meeting of the South-

ern Medical Association which meets in New Orleans, November 18 to 21, anticipating the matter of enjoyment and pleasure that will be ours when we renew old friendship and gain new ones. So with this object in view, we are printing the names of the officers of the Woman's Auxiliary to the Southern Medical Association to welcome heartily and to familarize ourselves with the names of these women who are doing their all for Auxiliary work.

President—Mrs. S. A. Collom, Texarkana, Tex.

President-Elect—Mrs. Charles E. Oates, North Little Rock, Ark.

First Vice-President—Mrs. George A. Hendon, Louisville, Ky.

Second Vice-President—Mrs. Milton Smith Lewis, Nashville, Tenn.

Recording Secretary—Mrs. Walter C. Swann, Huntington, W. Va.

Corresponding Secretary—Mrs. S. A. Collom, Jr., Texarkana, Tex.

Treasurer—Mrs. Southgate Leigh, Norfolk, Va.

Historian—Mrs. Augustus Street, Vicksburg, Miss.

Parlimentarian—Mrs. Edward Jelks, Jacksonville, Fla.

In rotation comes the program that the Woman's Auxiliary to the Orleans Parish Medical Society have made up for the entertainment of the visiting ladies:

Wednesday, November 18:

9 a. m. to noon—Registration (Lobby of Roosevelt Hotel) Headquarters.

10 a. m. to 12:30—Executive Board Meeting—Roosevelt.

12:30 to 3:30—Luncheon and open session of Auxiliary, tickets costing $1.00.

8 p. m.—President of S. M. A. Reception and Dance, Auditorium.

Thursday, November 19:

9:30 a. m. to noon—Business session—Roosevelt.

9 a. m. to noon—Golf tournament at New Orleans Country Club.

12:30 to 2 p. m.—Luncheon in French Quarter with entertainment. Sight-seeing trips with guides through Frenchtown immediately after luncheon.

8:00 p. m. to 10:30—Entertainment at the Auditorium given by the members of the Woman's Auxiliary to the Orleans Parish Medical Society, followed by informal reception.

Friday, November 20:

9:30 a. m.—Executive Board Meeting.

9:30 a. m.—Trip to Gulf Coast.

It is suggested that the Board Meeting be held during trip. The train is taken from the L. and N. Station in New Orleans. Debarkation at Pass Christian where busses will meet train and the ladies will be taken on a scenic drive along the Gulf Coast, from there to Biloxi, Miss., with a stop over for luncheon at prominent hotel. This is being arranged at a minimum cost and those taking this well worthwhile trip will do so at a far less cost than the usual rate. The returning train is scheduled to arrive in New Orleans at 6:10 p. m.

The Woman's Auxiliary to the Louisiana State Medical Society is glad to welcome into the fold a new organization and all our good wishes go to this new sister—for through the energy of Mrs. C. P. Gray and Mrs. Vaugham, a meeting was called in response to our Chairman of Organization Mrs. A. A. Herold's letter at the General Hospital at Bastrop and the organization of the Auxiliary to the Moorehouse Parish Medical Society was perfected.

The following officers were elected:

President—Mrs. R. B. Leavell, Bastrop.

Vice-President—Mrs. E. M. Clark, Mer Rouge.

Recording Secretary—Mrs. W. A. Rogers, Bastrop.

Corresponding Secretary—Mrs. J. N. Jones, Bastrop.

Treasurer—Mrs. F. L. Sims, Bastrop.

The Woman's Auxiliary to the Ouachita Parish Medical Society will start their activities for the year on Wednesday, October 21. The hostesses on this occasion will be Mesdames J. John Pracher, John Snelling and L. L. Shlenker. A very good

program has been arranged, which consists of a paper by Mrs. E. R. Yancey, and a vocal solo by Mrs. M. Pearce and with this in view the ladies are assured of not only an enjoyable time but also an instructive one.

From Lake Charles comes the encouraging news that the Woman's Auxiliary to the Calcasieu Parish Medical Society has held its second meeting of the year at the home of Mrs. R. G. Holbrook—when a most enjoyable time was enjoyed and where twenty members present were enthusiastic about the prospects of the coming year and what they intended to accomplish with even limited means, Mrs. Watkins and Mrs. G. C. McKinney assisted the hostess. Their next meeting will be held the second week in November with Mrs. T. H. Watkins and Mrs. W. P. Birdelon as hostesses.

The Woman's Auxiliary to the Orleans Parish Medical Society started this year with a large and most enthusiastic meeting given at the Orleans Club by the executive board. The reports of the various officers were read and a very ambitious program was outlined for the coming months. The Auxiliary is entering its third year of work and so quite naturally has its work more or less organized. Hygeia is being pushed and a speaker's bureau appointed to be at the service of the Auxiliary for any occasions—even now its members have visited many schools speaking in favor of Hygeia.

Mrs. Charles Rosen spoke briefly on the needs of the community chest asking the help of the members to put it over the top.

Dr. H. A. E. Walthers introduced Dr. Valarie Parker of New York, who is in New Orleans for a three months stay to instruct the community of the great need for proper Social Hygenia. Dr. Parker gave a talk which was instructive, interesting and enlightening. The meeting ended with a most delightful musical program.

JAMBALAYA.

We still get echoes, suggestions or what you will from the meeting of the Woman's Auxiliary to the A. M. A. held last June, one valuable idea which was stressed, was the keeping of clippings from newspapers and minutes, etc., to be filed away for the purpose of making State histories.

Another statement was that the Auxiliary to the Orleans Parish ranked sixth or seventh in membership which was quite a feather in our cap.

Our National President-Elect Mrs. W. J. Freeman of Philadelphia has been detained indefinitely in Europe by the illness of her son. We will be the losers in November at the meeting of the Southern by the absence of Mrs. Freeman.

An interesting report comes from Mrs. A. B. McClothlan who attended the meeting of the Auxiliary to the Kentucky Medical Society. She tells us of the wonderful work that has been done in the study of the State Medical and Health Laws and many other worthwhile activities.

We congratulate Texas on their wonderful showing; for there are already forty-three working Auxiliaries.

In hopes that some of our Louisiana Auxiliaries will be aided by these valuable suggestions when working up their line of work or study for the years we are printing an excellent program proposed by Mrs. F. E. Coulters of California, Chairman of programs.

They follow:

September—"Why an auxiliary?"

October—"Working principles of our own county health unit."

November—"Common defects in children."

December—"Teeth and their relations to health."

January—"What are we doing for the physically under privileged child?"

February—"Mental hygiene."

March—"Book review" and "What our county is doing for the mentally ill."

April—"Book review" and "Our state health laws."

M. H. Musser,
State Publicity Chairman.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

L. S. Lippincott, Editor

Jacob S. Ullman, Associate Editor — *D. W. Jones, Associate Editor*

THAT WE MAY KNOW EACH OTHER BETTER.

Dr. James Walter Lucas was born at French Camp, Choctaw County, Mississippi, on the fourth day of March, 1872. He graduated from the French Camp Academy in 1900 and received his B. A. degree from Mississippi College in 1893. For three years he was principal of the High School at Kilmichael. He graduated in Medicine from the University of the South with the honor of being salutatorian of his class. He served as intern in the Vicksburg Hospital between courses and his first professional services were for a railroad company in Guatamala, Central America.

JAMES WALTER LUCAS, M. D.
Moorhead, Mississippi
Councilor, First District.
Mississippi State Medical Association.

For the last thirty-one years he has been actively engaged in the practice of his profession at Moorhead. He took some postgraduate work in medicine and surgery at the New York Polyclinic in 1904 and in Chicago in 1912. He had the very enjoyable distinction of being the official physician of the American Educational Association for eight years, coming in touch with some of the best writers of the nation. His record as County Health Officer in a time of need was efficient and approved. He has served as local surgeon of the Southern and C. & G. Railroads for twenty-five years and as District Surgeon for the Y. & M. V. Railroad for the last twenty-five years. He has been an active member of his District, State, and Southern Medical and Railroad Associations all along the way.

Dr. Lucas has a wife and four children, Dr. John F. Lucas, his oldest son, a graduate in medicine from Tulane University and a member of the Clinic of Drs. Gamble Brothers and Montgomery at Greenville; Lieutenant Joseph W. Lucas and Ensign H. D. Lucas, graduates of the United States Naval Academy, Annapolis, and now serving as officers in the United States Navy, and his daughter, Miss Louise Lucas, who will receive her B. A. degree from college next year.

CALENDAR.

November 2: Staff of Jackson County Hospital, 7:30 p. m.; Staff of Meridian Sanitarium, 7 p. m.

November 3: Staff of King's Daughters' Hospital, Brookhaven, 7:30 p. m.

November 4: Staff of Chamberlain-Rice Hospital, Natchez; Staff of Vicksburg Infirmary, 7:30 p. m.; Staff of Rush's Infirmary, Meridian, 7 p. m.; Staff of Dr. F. G. Riley's Children and Maternity Hospital and Clinic, Meridian, 7 p. m.; Clarksdale and Six Counties Medical Society, Clarksdale, 7:30 p. m.

November 5: Pike County Medical Society, McComb, 7:30 p. m.

November 6: Natchez Medical Club, 1 p. m.

November 9: Staff of Vicksburg Sanitarium, 6:30 p. m.

November 10: Issaquena-Sharkey-Warren Counties Medical Society, Y. M. C. A. Vicksburg, 7 p. m.; Staff of Natchez Sanatorium, 7 p. m.; Winston County Medical Fraternity, Louisville.

November 11: Staff of King's Daughters' Hospital, Greenville, 7 p. m.

November 12: Staff of Vicksburg Hospital, 7:30 p. m.

November 13: Staff of Anderson Infirmary, Meridian, 7 p. m.

November 17: Staff of Natchez Charity Hospital, 8 p. m.

November 20: Natchez Medical Club, 1 p. m.

December 1: Claiborne County Medical Society, 3 p. m.; Staff of King's Daughters' Hospital, Brookhaven, 7:30 p. m.

December 2: Staff of Chamberlain-Rice Hospital, Natchez, Staff of Vicksburg Infirmary, 7:30 p. m.; Staff of Rush's Infirmary, Meridian, 7 p. m.; Staff of Dr. F. G. Riley's Children and Maternity Hospital and Clinic, Meridian, 7 p. m.

December 3: Pike County Medical Society, McComb, 7:30 p. m.

December 4: Natchez Medical Club, 1 p. m.

December 7: Jackson County Medical Society, 7:30 p. m.; Staff of Meridian Sanitarium, 7 p. m.; Staff of Jackson County Hospital, 7:30 p. m.

December 8: Joint meeting of the Fifth District Medical Society of Louisiana and the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg; Staff of Natchez Sanatorium, 7 p. m.; Winston County Medical Fraternity, Louisville.

December 9: Staff of King's Daughters' Hospital, Greenville, 7 p. m.

December 10: Staff of Vicksburg Sanitarium, 6:30 p. m.; Staff of Vicksburg Hospital, 7:30 p. m.

December 11: Staff of Anderson Infirmary, Meridian, 7 p. m.

December 15: Staff of Natchez Charity Hospital, 8 p. m., North East Mississippi Thirteen Counties Medical Society, Tupelo, 2 p. m.

December 17: East Mississippi Medical Society.

December 18: Natchez Medical Club, 1 p. m.

DELTA MEDICAL SOCIETY.

The semi-annual meeting of the Delta Medical Society, presided over by Dr. E. R. Nobles of Rosedale, was held in the auditorium of the Sunflower County Junior College auditorium, Moorhead, on the afternoon of October 14, with a large attendance and a splendid program, which was fully discussed by visitors and members. The scientific program included the following:

1. Meningitis.—Dr. W. P. McDavid, Parchman.

Discussed by Drs. R. C. Bunting, Memphis, Tenn., and J. G. Archer, Greenville.

2. Varicose Ulcers; Rubber Bandage Treatment.—Dr. T. J. Barcley, Isola.

Discussed by Dr. Hugh Gamble, Greenville.

3. What Can We Promise the Asthmatic?—Dr. J. T. Pegues, Greenville.

Discussed by Drs. John C. Culley, Oxford; G. M. Barnes, Belzoni; R. C. Smith, Drew, and Seale Harris, Birmingham, Ala.

4. Vomiting Problems in Children.—Dr. Ralph Bowen, Memphis, Tenn.

Discussed by Dr. R. E. Wilson, Greenville.

5. Hyperinsulinism and Dysinsulinism.—Dr. Seale Harris, Birmingham, Ala.

Discussed by Dr. John C. Culley, Oxford.

The banquet was served by the Junior College girls in the dining room of the Junior College and was presided over by Dean Paul West. He in a gracious and pleasing manner introduced the following speakers: Supt. J. S. Vandever, Dr. P. L. Mull, Dean of the University of Mississippi School of Medicine; Dr. John C. Culley, Oxford, President of the Mississippi State Medical Association; Dr. D. C. Montgomery, Greenville; Dr. E. R. Nobles, Rosedale, retiring President of the Delta Medical Society; Dr. George Baskerville, Greenwood, newly elected President of the Delta Medical Society, and Dr. Seale Harris, Birmingham, Ala. All the after-dinner speeches were interesting and enjoyable. The entire program was considered one of the best that we have had in years. There were about 100 present. The Sunflower College band, the musical department under Mrs. A. M. Applewhite, Mrs. McPherson, and the young ladies of the Junior College, who served the elegant banquet, all contributed to the enjoyment of the occasion.

J. W. Lucas,
Councilor, First District.

DELTA MEDICAL SOCIETY OFFICERS.

At the semi-annual meeting of the Delta Medical Society, held at Moorhead on October 14, officers for the coming year were elected as follows:

President, Dr. George Baskerville, Greenwood.

Vice-Presidents, Drs. J. G. Archer, Greenville; W. A. Carpenter, Cleveland; U. S. Wasson, Moorhead; C. C. Hightower, Itta Bena; G. M. Barnes, Belzoni.

Delegates to Mississippi State Medical Association—Drs. F. M. Acree, Greenville; T. D. Allen, Shaw; W. H. Weeks, Doddsville; L. B. Otken, Greenwood; T. J. Barkley, Isola.

Alternates—Drs. O. P. Thompson, Greenville; J. D. Simmons, Gunnison; W. R. Richardson, Indianola; J. P. Kennedy, Greenwood; J. C. Higdon, Belzoni.

R. C. Finlay, Secretary.

VICKSBURG HOSPITAL.

The regular monthly meeting of the staff of the Vicksburg Hospital was held on October 8, and was called to order by the President, Dr. G. P. Sanderson, at 7:45 p. m. Drs. I. C. Knox, W. H.

Parsons, W. E. Akin, and W. E. Weston were present.

The minutes of the preceding meeting were read and adopted without change. Analysis of the work done in the hospital during the past month, roentgen-ray report, laboratory report, medical and surgical reports were read. The reports were discussed freely. There were four surgical deaths and one infection.

The scientific program was presented as previously outlined with the exception of the paper on endocervicitis, which will be presented at the next meeting.

It was moved and carried that in the future the meeting would begin promptly at 6:30 p. m., even though as few as two members be present. The filing system according to the etiological classification of cases will be discussed at the next meeting.

Refreshments were served and the meeting adjourned.

VICKSBURG SANITARIUM.

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held on October 10, with ten members and three visitors present. After transaction of the business of the staff and a consideration of the reports of the records department and analysis of the work of the hospital, the following special case reports were presented:

1. Hemolytic Streptococcus Gangrene.—Dr. A. Street.

2. Repair of Median Nerve Following Injury. —Dr. J. A. K. Birchett, Jr.

3. Spontaneous Pneumothorax. — Dr. L. J. Clark.

Brief reports on the literature of the month were made as follows:

1. Dr. J. A. K. Birchett, Jr.: Pancreatic juice in gallbladder disease; Salivary gland stones; Malignancy in benign giant cell tumors of bone; Roentgen-ray diagnosis of lesions of the breast; Ascheim-Zondek pregnancy test.

2. Dr. L. J. Clark: Electrocardiography; Myxoedema and heart disease; Syphilitic Aortitis; Portal sclerosis.

3. Dr. L. S. Lippincott: Prognosis in cancer; Ascheim-Zondek pregnancy test.

4. Dr. G. C. Jarratt: Encephalography in children.

Selected radiographic studies were demonstrated: Enlarged thymus; Pulmonary tuberculosis (2 cases); Fracture of skull; Pott's disease of thoracic spine; Duodenal ulcer; Urinary calculi (3 cases).

Dr. Walter E. Johnston was elected to membership on the staff.

The meeting closed with a lunch.

AN EDITOR TALKS.

(Continued from last month)

(From the Preparation of Papers on Medical Subjects: How to Make Them Interesting as Well as Instructive.—The Editor Talks, by Dr. George L. Richards, Fall River, Mass).

"If you are reading the paper get the attention of the last person in the audience; be sure he hears you and be sure you interest him. If you hold his attention you have captured all the rest on the way. Never have the word 'louder' come to you but once.

"Where possible, case reports should be summarized. It is not necessary to give the minutiae of each individual case unless that minutiae is essential to its proper understanding. Most of the family history can be omitted whereas the previous history may be very important.

"Give only the essentials of the daily clinical history. Too many times a case report reads like a transcript of the hospital record. Where there is an autopsy report only what is relevant. Organs not mentioned may be assumed to be negative or it may be stated 'other organs normal.'

"Do not use the word 'she' or 'he' and in the next sentence 'the patient,' alternating between these terms, as often occurs in many manuscripts. In a case history, once having given the sex and age, assume that the person about whom you are writing continues to be the patient.

"I do not think it is good form to state that it is case No. 20,212 that you are reporting or that it was referred through the kindness of Dr. J. or H. When reporting a consultant's opinion state the essential facts and not of necessity his complete statement. It is not always necessary to give temperature, pulse and respiration for each day of the report, nor, if a chart is reproduced, is it essential to give normal temperature for the convalescent period. The simple statement that from that time on the temperature was normal suffices.

BIBLIOGRAPHY.

"I approach this subject with some fear that I may be misunderstood. Bibliographies are useful when they are distinctly referred to in the text and have some direct bearing on the subject, but

when they are unduly long and have evidently been made by some energetic secretary who has culled from a medical library about all the references to be found on the subject, they appear to me to be somewhat superfluous.

"This is especially the case when many of the references are foreign and are presented with the names of the journals badly spelled and with no uniformity in the abbreviations used.

"One year we published a paper of 6½ pages which had 65 references in the bibliography. In this instance it was a report of four cases, and the references were all referred to in the text. Except, however, in the largest kind of a medical library it would have been impossible to verify these references. Fortunately they were correct as to spelling. That kind of a bibliography, even if long, is permissible and may be very useful to one looking up the subject.

"On the other hand, in 1905 we published an article with 251 bibliographic references, none of which were specifically referred to in the text. These references may all have been valuable, but such a long list suggests padding and an attempt to show erudition and familiarity with the literature."

(To be continued)

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY.

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Y. M. C. A., Vicksburg on October 13, with 24 members and two visitors present. The scientific program included:

1. Meckel's Diverticulum—Its Significance and Complications (With Case Reports).—Dr. J. A. K. Birchett, Jr.

Discussed by Drs. A. Street, G. M. Street, H. H. Haralson, E. F. Howard, and L. J. Clark. Dr. Birchett closed.

2. The Treatment of Pneumonia in the Country.—Dr. G. W. Gaines.

Discussed by Drs. W. C. Pool, E. F. Howard, W. G. Weston, R. H. Foster, S. W. Johnston, L. S. Lippincott, A. Street, W. H. Scudder, and W. E. Johnston. Dr. Gaines closed.

3. The Treatment of Malaria.—Dr. W. C. Pool.

Discussed by Drs. R. H. Foster, G. W. Gaines, G. C. Jarratt, L. J. Clark, J. B. Benton, W. H. Scudder, F. M. Smith. Dr. Pool closed.

4. Intussusception.—Dr. S. W. Johnston.

Discussed by Drs. G. C. Jarratt and N. D. Lewis. Dr. Johnston closed.

Dr. F. Michael Smith briefly discussed the recent meeting of the American Public Health Association.

The next meeting of the Society will be held Tuesday, November 10. The committee in charge of program consists of Drs. G. C. Jarratt, Chairman, D. A. Pettit, M. J. Few, J. A. K. Birchett, W. E. Akin, Jr., B. B. Martin, M. H. Bell, W. H. Scudder, R. H. Foster, and W. E. Johnston.

COMMUNITY HOSPITALS.

"Mr. W. Hamilton Crawford,
"Hattiesburg, Miss.

"Dear Mr. Crawford:

"Your letter of May 18th, was received this morning.

"I agree with you that with the active co-operation of all the hospitals in the State the Mississippi Hospital Association should soon hold a very prominent place in the direction of health activities in our State.

"Personally I am of the opinion that it will be necessary to arouse the enthusiasm of all of the hospitals of the State and to inculcate in them a keener desire for a higher standard of hospital work than one sees manifested in such a large proportion of those that one visits. The fact that only 20 or 25 per cent of the hospitals of the State have qualified under the Minimum Standard of Requirements is to my mind a serious reflection upon the standards under which they are operating.

"Some have been very much enthused for the last two or three years over the subject of the community hospital and particularly State aid for them. There is no question but that State aid theoretically would be very desirable for local institutions for several reasons. However, there are a number of features which are decidedly to its disadvantage. First amongst which is that heretofore several of the smaller hospitals have been practically maintained by State aid. Secondly, there are many of them whose equipment is not of such nature as would qualify one to make a thorough examination with it. Thirdly, State aid to those insufficiently equipped institutions would inevitably tend to cause an increase in unnecessary surgery, and its concomitant associate poor surgery.

"There seems to be in some quarters a belief that all any registered physician needs to become a successful suregon is a place in which to operate. Men who have not had to go through the mill of preparation do not realize that surgical judgment, skill, diagnosis, and operating technique

are the result as a rule of years of application and training. The public would suffer the most, but the medical profession as a whole would receive a set back of considerable magnitude, particularly along surgical lines.

"It is not good policy, if one has to be politic to tell physicians that they are not prepared for certain kinds of work, nevertheless, if higher standards are to be maintained it is essential that the lesson be brought home to all that the individual physician should have a certain amount of clinical experience and training, before he is justified in jeopardizing the lives of his patients through inexperience along surgical lines.

"There should be developed in the hospitals a realization that their greatest good can only be accomplished when they have developed a conscience which puts service above everything else, and which will cause them to insist upon thorough equipment, and that those who use their facilities should have thoroughly prepared themselves so that they can render the highest type of service.

"I trust that you will pardon the length of this letter but from my observation of the hospital facilities of many of the hospitals of the State, and the manner in which these hospitals are conducted, I cannot but feel that the standards of medical and surgical practice will be lowered, if these low grade hospitals are not in some way brought up to a higher standard.

"With kindest regards, and wishing for the Mississippi Hospital Association every success, I am as ever

"Sincerely yours,
(Signed) H. A. Gamble.

SECTION CHAIRMEN.

President J. C. Culley, Oxford of the Mississippi State Medical Association called a special meeting of the chairmen of all sections for Monday, October 5, at 7 p. m., at the Robert E. Lee Hotel in Jackson. Those present were Dr. Culley, Dr. T. M. Dye, Secretary of the State Association; Dr. W. H. Anderson, Booneville, Chairman of the Surgical Section; Dr. G. W. F. Rembert, Jackson, Chairman of the Medical Section. Dr. George E. Adkins, Jackson, Chairman of the Radiological Section; Dr. F. M. Smith, Vicksburg, Chairman of the Public Helth Section and Dr. Edley H. Jones, Vicksburg, Chairman of the Eye, Ear, Nose & Throat Section. Dr. E. P. Mull, Dean of the University of Mississippi School of Medicine, was also present. All were guests of Dr. Culley at an excellent dinner, following which business pertaining to the next Association meeting was discussed. The program was tentatively arranged and all chairmen were requested to have their complete programs in the hands of the Secretary not later than April 1, 1932. After the meeting Drs. Culley and Mull left for Natchez to attend a meeting of the Eighth Councilor's District Medical Society.

WARREN COUNTY.

Drs. E. F. Howard and S. W. Johnston, Vicksburg attended the meeting of the Constitution and By-Laws Committee of the Mississippi State Medical Association in Natchez on Tuesday, October 6.

Dr. Edley H. Jones attended the convocation of the American College of Surgeons in New York City. The degree of Fellow was conferred upon him Friday, October 16.

Dr. J. A. K. Birchett, Jr., attended the Annual Meeting of the Postgraduate Assembly at Milwaukee.

E. H. Jones, County Editor.

NESHOBA COUNTY.

The map sent me by Dr. L. S. Lippincott shows the County reporters to be very delinquent. Let us agree to do better.

My excuse for not reporting—two months ago I fell and fractured three ribs, and as soon as I began to recover, I was laid up in bed ten days with a severe case of flu from which I am merely convalescing.

Dr. Charlie Harrison who has been to Memphis and Jackson for examination, found his trouble to be sinusitis. He was operated upon in Jackson. His condition is considerably improved.

Too, the report is that Dr. Harrison went fishing and caught an eight-pound trout. I am wondering just how big the fish would have been had he been well.

Mrs. W. H. Banks who has been quite ill is also recovering.

Dr. W. R. Hand and family made a pleasure trip to Quitman as guests of his son, Dr. Granvile Hand.

The last issue of the Journal is warning us against the fellow who is going over the county purporting to be Dr. H. N. Mays of New Albany. This fellow has worked our district, too. He has now reduced his calls as low as $10.00.

J. S. Hickman, County Editor.

COPIAH COUNTY.

Dr. J. M. Dampeer of Crystal Springs, one of Mississippi's most beloved physicians, has been confined to his home most of the time during the past six months. We are pleased to state that

he is better now and all hope for a rapid convalescence.

W. L. Little, County Editor.

PONTOTOC COUNTY.

A Maternal Hygiene Institute for physicians was held last week at Houston, by Dr. J. R. McCord of Emory University, who gave five excellent lectures. They were well attended and enjoyed by physicians from several adjoining counties. Those who attended from Pontotoc county were: Dr. E. G. Abernethy, Dr. W. R. Card, Dr. O. F. Carr, Dr. R. P. Donaldson, Dr. Z. A. Dorsey, Dr. D. T. Dempsey and Dr. W. H. Reid.

We're glad to report that Dr. J. W. Turner of Pontotoc is able to be out again after a two weeks' illness.

It is distressingly healthy here for the time of year. Still having a few cases of diphtheria scattered around over the county.

The Ecru High School, which has been closed for two weeks on account of diphtheria, opened again last Monday morning.

Mack Donaldson is the name of the youngster who arrived in the home of Mr. and Mrs. Mack Secord of Montgomery, Ala., September 24. Mrs. Secord was before her marriage Gladys Donaldson, daughter of Dr. R. P. Donaldson.

R. P. Donaldson, County Editor.

PIKE COUNTY MEDICAL SOCIETY.

The Pike County Medical Society met at the McColgan Hotel, McComb, Thursday, October 1, at 7 p. m.

Program: Endocarditis.—Dr. G. W. Robertson.

The Menace of Psychiatry.—Dr. Elise Rutledge.

The following members were present: L. J. Rutledge, W. M. Biggs, M. D. Ratcliff, G. W. Robertson, E. M. Givens, T. E. Hewitt, B. J. Hewitt, S. Paul Klotz, Thomas Purser, L. W. Prock, J. E. Brumfield, R. H. Brumfield.

Drs. J. E. Hewitt and A. J. Fortinberry who have recently located in Summit and McComb, respectively, were elected members of the Society.

Robert H. Brumfield, Scretary.

WEBSTER COUNTY.

The Winona District Medical Society met at Eupora, Ocotber 6, with 29 physicians present. A splendid program was given. The Society will hold its next meeting in Kosciusko in January, 1932.

Hugh K. Curry, son of Dr. and Mrs. W. H. Curry, Eupora, entered the university of Tennessee in September to take up the study of medicine.

Dr. W. A. Berryhill, Eupora, has just returned from a six weeks' visit with his son in the Rio Grande Valley. He looks almost like he had found the "fountain of youth."

W. H. Curry, County Editor.

COUNCILOR APPOINTMENT.

Please announce in the Journal that President Culley has appointed Dr. H. Lowry Rush of Meridian as Councilor for the Sixth District to succeed Dr. W. G. Gill, deceased.

T. M. Dye, Secretary.

THE INSURANCE SITUATION.

Dear Mr. Editor:

The Tate County letter in the October Journal alludes to a matter regarding our life insurance feature that apparently needs some investigation. There are no printed records available, but if my recollection is correct it was in 1928 that the Council advised and the House of Delegates authorized a contract between the Association and the American National Insurance Company of Galveston, Texas, under the terms of which those members of the Association who wished to do so could purchase, at a low rate and without examination group insurance to the amount of three thousand dollars each.

Apparently in 1929 this contract was modified to increase the amounts of the individual purchasers to six thousand dollars, though again there is no record of such authorization.

In 1930 the Council passed and the House approved a new contract as follows:

"Be it resolved that the duly elected House of Delegates of the Mississippi State Medical Association in convention assembled in the City of Vicksburg, Mississippi on this the fifteenth (15th) of May, Nineteen Hundred and Thirty, does hereby authorize, instruct and empower T. M. Dye (Secretary of said Association) as follows:

"That on August 1st, 1930, when the Third Annual Premiums of the various members of the Mississippi State Medical Association on certain group Life Insurance Certificates now held in the American National Insurance Company of Galveston, Texas, fall due, all of these certificates are to be renewed *on the same basis as they are now carried by the American National Insurance Company* (italics mine) with the All States Life Insurance Company of Montgomery, Alabama."

This was done, but apparently the All States repented of its bargain, because last spring it notified the holders of the certificates that the

contract, which would expire August 1, 1931, would not be renewed, offering instead to the holders of certificates a different form of policy —a five-year term, non-participating, but without increase in premium from year to year. *An examination was essential.*

I was offered one of these for an annual premium of $74.43 plus a bonus of $9.99, the bonus to secure me the rate of fifty-six years of age instead of fifty-seven. I paid the bonus, but did not accept the policy because I had learned in the meantime, that I could get the same policy for the same money, without any bonus, from a company right here in Mississippi. So I asked that my bonus be returned. It was not, but I took the Mississippi policy.

Now I learn from Dr. Eason's letter, and others have been similarly advised, that men have to resign from the Association in order to get these policies. I do not understand the situation at all, except that the resignation is only temporary, but it strikes one as a bit remarkable that the Council, if it was the Council that did it, for again there are no records of the transaction, should enter into a contract that calls for even temporary withdrawal from the Association. If one withdraws, resigns, from one's County Society and the Association and then goes back, one pays, or should pay, one's dues a second time. In my case this would amount to nine dollars. Add the bonus I was to pay, practically nineteen dollars. For what? For a policy that I can duplicate without any bonus or any resignation. Yes, I can, I have it here on my desk.

And suppose that during the time I am out of the Association I am sued for malpractice. What happens? I would hardly have the nerve to ask the Council to defend me.

There is probably some explanation for all this, and probably it is so simple that even a moron like myself can understand it. But as there are others besides myself, Dr. Eason being one, who are completely bewildered, may we ask that we be given the explanation and, at the same time, that we be told who authorized the change in the contract and where we can find a record of that authorization.

Yours very truly,

E. F. Howard.

Vicksburg, Mississippi.
October 6, 1931.

THE HISTORY.

The work of collecting material for the History necessarily progresses slowly but the results have exceeded my expectation. For the most part, those I have called on for assistance have responded promptly and their help has been very effective. My thanks are due them all, but I am particularly grateful to the Secretary of the Northeast Mississippi Thirteen County Society, Dr. J. M. Acker, who has very materially lessened my labors.

One part of the History is to be devoted to brief biographies of former presidents—each to be illustrated by a photograph taken as nearly as possible to the time when the subject was president. This department is the most difficult to complete as many of the men are dead—and some of the others seem to be. The list of wants is appended in the hope that some of the members may be able to supply them.

E. F. Howard, Historian.

Personal Records Needed For the History:

W. F. Hyer, Meridian—1880-81—photograph.

B. F. Ward, Winona—1881-82—photograph.

J. M. Greene, Aberdeen—1883-84—photograph.

J. B. Gresham, West Point—1885-86—photograph.

R. E. Toombs, Greenville—1886-87—photograph.

N. L. Guice, Meridian—1887-88—photograph.

J. E. Halbert, Mound Landing—1889-90—photograph.

W. M. Pain. Aberdeen—1897-98—photograph.

H. A. Minor, Macon—1900-1—photograph and biography from 1910.

T. J. Mitchell, Jackson—1904-5—photograph.

W. W. Crawford, Hattiesburg—1906-7—photograph and biography from 1907.

J. W. Gray, Clarksdale—1908-9—photograph and biography from 1910.

D. J. Williams, Ellisville—1911-12—photograph and complete biography.

S. W. Glass, Dublin—1912-13—photograph and complete biography.

J. W. Barksdale, Winona — 1920-1 — photograph and complete biography.

W. A. Dearman, Gulfport—1923-24—photograph and complete biography.

John Darrington, Yazoo City—1927-28—photograph and complete biography.

W. H. Frizell, Brookhaven—1928-29—photograph and complete biography.

H. A. Gamble, Greenville—1929-30—photograph and complete biography.

OCTIBBEHA COUNTY.

Enclosed is self-explanatory and this is the only thing done by any of the local doctors that they would care to have published. Dr. J. F. Eckford is the son of Dr. J. W. Eckford, and a

graduate of Mississippi A. & M. College and Tulane University.

Mr. and Mrs. Dean Carleto Holmes
request the honor of your presence
at the marriage of their daughter
Nellie R.
to
Dr. John Featherston Eckford
on Wednesday evening, the seventh of October
Nineteen hundred and thirty-one
At eight o'clock
Centenary Methodist Church
McComb, Mississippi

H. L. Scales, County Editor.

MONROE COUNTY.

Cheap cotton, hard times and hot weather—can you beat it? On the other hand the fields are full of yellowing corn; potato patches are groaning in travail as the rows swell and crack and split; muscadines are dropping from the burdened vines and they say the lazy catfish are beginning to bite. Soon, "the frost will be on the pumpkin and the corn pone will be hot." Already the air is laden with the aroma of sorghum as it is evaporated in the cooking pan. If it were not for the thought of notes soon to fall due with interest on the same together with taxes too heavy to be met, life might be too much like an idyllic dream.

The Thirteen County Society held its third quarterly meeting in Columbus recently. You should have been there. It was a great meeting of a great society. The program was good, the interest was fine, and the fellowship and good cheer were wonderful. It is true the attendance was not as full as all had wished and as I had expected. But when we looked for a reason for the rather small attendance we discovered that an enterprising reporter had given out the misleading information that the meeting was held the day previous. This report kept our friends from Memphis and elsewhere, who always attend our meetings, away. It, no doubt, kept some of our own membership from going. Just before leaving for home, I was told by some one that Dr. Fite, Dr. Stalworth and other members of the entertainment committee had instigated this report for fear that "everybody" might be there as they were at Houlka. However, it was not that they were not willing to entertain everybody but because, in Columbus, they have no open spaces and wooded lawns in which to spread great feasts as they do in Dr. Walker's wonderful little town. Altho they are so sadly handicapped by city environment, Columbus lived up to her well deserved repute of hospitality. A most delightful banquet was served in the patio of that historical old hostelry, the Gilmer Hotel. No one who was there will forget or regret the fact.

The North Mississippi Medical Society, remembering their visit with us recently, extended to us an invitation to meet with them at the University on October 29. Their program will be rich and great; for only great men will have a part on this program. Among these men are W. S. Leathers, James S. McLester, McElroy of Memphis, Roberts of Atlanta and the great Matas of New Orleans. What a treat awaits those who may be able to go. Organized medicine in North Mississippi "holds high the torch." We love our profession, we love each other and are determined to do so until the end. We can not love those whom we do not know. It is so easy to love those whom we do know. There is no place where it is so easy to know each other as it is in the ranks of an interested membership of a small medical society.

The next and last meeting of our society for the year will be held in Tupelo on Tuesday, December 15.

I omitted the statement that Dr. Seale Harris, Sr., of Birmingham, was with us at Columbus. He frequently meets with us and is always welcome. Dr. Underwood is still one of us; he too, was there.

Aurevoir, but not farewell.

G. S. Bryan, County Editor.

HOSPITALS.

In speaking of hospitals in this paper I am dealing particularly with hospitals in the Commonwealth of Mississippi, and in doing so it is my earnest hope that I may say something which will stimulate healthy, progressive thought and action toward improvement in efficiency and cooperation, both in hospital service and medical education, to the end that the person in need of such service may be the beneficiary.

Hospitals may be considered as the workshop or laboratory of the physician and the nurse for the treatment of the sick and disabled. In an institution worthy of the name hospital, there are many supplementary aids to the physician and nurse; and, consequently, it would seem to even the uninitiated that the sick can receive more rational aid in his quest for health in an institution of this kind that he could in a place where these necessary aids could not be employed. Hence, it may be easily seen, even by the unwary, that there is a logical and a legitimate reason for the constant and continuous effort on the part of the medical profession, and hospital administrators, to improve hospital and medical service.

Mississippi medicine is beginning to catch the halo of a vision in the hospital field; and the vision is becoming clearer that, if organized medicine in the State of Mississippi is to gain its rightful sphere and give the service that is rightfully expected, it must become hospital conscious and enlist the aid of every legitimate source in bringing about a hospital condition so that every person within the confines of the State may avail themselves of the proper medical and hospital care when in need of such services. There has been great strides made in the last few years; but there remains much to be done, much that can be done, and much that will be done in the way of improvement of this very worthy and needed cause.

It may be said, and I think the contention is correct, that the State owes a duty to its indigent sick; but just how that obligation is to be met is a subject of controversy in the minds of some; and it can easily be seen that, before a definite, sane, sensible, and equitable plan can be worked out, before a definite plan of action can be decided upon with any degree of expectation of results, the medical profession must come to a mutual agreement.

The State has for several years maintained five charity hospitals in its southern end. These hospitals, considering the doles handed them for maintenance, have done much good to the sections which they serve; but, even so, there is still much improvement which can be accomplished with honest effort, on the small appropriations they get. The efforts put forth toward making state maintained hospitals, teaching institutions, is well worth the price in bringing about higher standards of service to the patients and more competent physcians and surgeons, who will go out to better serve the people of the Commonwealth in the different communities in which they may choose to locate.

Political manipulations should have no place in an institution for the treatment of the sick. In my judgment, this is the chief cause for lack of any efficiency, past, present, or future, which may have resulted in our state hospitals. A genuine fraternal interest manifested on the part of the medical profession as a whole will prevent any such tragedies, and that to the eternal good of the public and the profession. Hospitals should not be made political footballs, but rather institutions for the genuine care of the man down flat on his back. the man who needs help, and not the professional political papsucker. The hospitals should be taken out of politics as far as is humanely possible. If I may be allowed to suggest, I would say that one plan of correcting this evil would be for the entire hospital personnel to be under direct control of the hospital administrator—he to be responsible to a board of directors named by the Governor, the executive member of the State Board of Health, and the President of the State Medical Association; the board to be composed of not more than five members, and not more than one member from a county; the Governor to name two members, the president of the State Medical Association, two members, and the executive member of the State Board of Health to name one member; and the board in turn to name their officers.

I want to digress enough to say that the medical profession of Natchez, the city in which the hospital of which I am superintendent is located, has cooperated with me to the fullest extent, and I shall always feel grateful to them.

The subject of community hospitals for the past year or two has held an interesting place in medical discussions, it being held by the proponents of the plan that you carry adequate medical, hospital, and nursing service to the door of the people—a plan which, in my judgment, if properly worked out, will be of much merit to both the public and the profession. However, I doubt the wisdom at this time of bringing about the dissolution of the present state hospitals in order to try out merely an idealistic plan, which at this time has not been worked out on an equitable basis; but I do think that in the northern portion of the State, where the State hospitals are not accessible, a plan of community hospital support should be given by the State. A committee has been appointed by the State Hospital Association to work out and present a plan; and I have faith enough in the committee to believe they will work out a feasible and equitable plan. Of course, it is very evident to all that such a plan must of necessity be properly safeguarded, or the purpose for which it is intended would be defeated. The honor and integrity of the medical profession would be put on trial, and I think it would stand the test. In other words, I think that the medical profession could be depended upon to handle the problem fairly, justly, and equitably. In my opinion, the establishment of an equitable and comprehensive community hospital program would unquestionably solve the question of State medicine by carrying adequate and scientific medicine to an easy access to all the people and at a great saving in cost as a whole. The community hospital would serve also as an educational center for all the doctors within the radius which the hospital serves. Thus, by constant contact with the best medical minds, the standard of service will be raised, and the public will be benefitted thereby.

To my mind, there is another hospital situation in Mississippi, which offers wonderful possibilities in the way of medical education and which would only cost a little effort and cooperation to put into effect. I am thinking of the State Insane Hospital and the State Charity Hospital in Jackson. If an arrangement of coordination and cooperation could be put into effect, the State could offer an excellent internship to the young doctors of the State, who now have to go to other States for their accredited interne training. The greatest effort would be the organization of a workable staff and the keeping of a comprehensible record. Little thought has possibly been given to this phase of the hospital situation, but the possibilities of such an arrangement both from the standpoint of medical education and the care of the patients at once suggests itself. Let Mississippi avail itself of its medical opportunities.

This paper was written at the request of Dr. Leon S. Lippincott, president, and Dr. C. M. Speck, secretary of the State Hospital Association.

Supplement:

As a supplement to the paragraph on community hospitals, I would say that if properly conducted, they will add greatly to the status quo of the general practitioner of medicine, who is still the bulwark, the superstructure, upon which the whole structure of medicine securely rests, and must depend for its very existence. Destroy the general practitioner, and organized medicine will result in crumbling decay. The general practitioner of medicine, is the greatest specialist of them all, because it is he that in addition to scientific medicine, must understand the human fancies and foibles, the actions and reactions, the impulses and emotions, in order that he may be able to successfully treat their ailments. I repeat that the general practitioner is the greatest specialist of them all, and his status must be preserved or oragnized medicine will result in crumbling decay.

J. A. Rayburn, Natchez.

THE DOCTOR'S SIDE OF THE QUESTION.

The following letter by Dr. L. S. Gaudet, Natchez, should be read by every doctor in Mississippi. It should be given their most careful consideration. The physicians' altruism has for so long been taken for granted by the laity that they have come to make demands of the physician such as they would never dream of making of any one else.

In times of disaster the Red Cross not only pays for its supplies, but it pays its "volunteer" lay workers. Lecturers and welfare workers are all remunerated for their services but the doctor is expected to give his services gratis. In addition, when the annual drive for funds is on he is expected to give of his money as liberally as any. Nothing is ever said of crediting him for the services rendered.

It has been stated that the cost of illness to the great middle class may be reduced by the community hospital. Most physicians can testify to the fact that the cost of illness usually amounts in proportion to the demands of the patient and his family. Many patients want special nursing longer than is necessary and many want other expensive luxuries. After the hospital bill and nursing bil has been taken care of, the patient frequently has nothing left for the doctor. The doctor has made much of being a friend to the patient, but he pays dearly for this privilege. When a man needs a lawyer, he knows that he cannot expect the lawyer to act until he has prevailed on his relatives and friends to put up the cash. But in the case of illness the relatives see no wrong in asking the doctor, often a stranger, to carry the burden.

The Committee and Community Hospitals should see to it that the staff is not asked to do too much charity work. We now have commissions to regulate our prescribing, and if the State puts up any great amount of money for the care of hospitals it is obvious that there will be an agency to control the expenditure of these funds. This agency will not be concerned in keeping down the number of charity patients. Here we may have State controls, even more than at present in our hospitals.

The physician will always have to do charity, but his free work should not be allowed to increase his overhead expenses. Caring for his friends without adequate remuneration is a luxury that few Mississippi doctors can afford.

J. S. Ullman, Natchez.

At the meeting of the Eighth Councillor's District Medical Association, held in Natchez a few days ago, Dr. John C. Culley, president of the Mississippi State Medical Association, in his discourse on the Community Hospital, made the statement that he had operated on 20 cases of appendicitis in his hospital, and received the sum of $50.00 for these 20 cases.

This is a most astounding statement to me, and should make a deep impression on those who were present.

Some few months ago, I read a statement, how authentic I am not in position to state, that the

medical profession in the United States donated in 1930 the sum of $185,000,000, or about half a million a day in free service. This, if true, is really astounding, and is a problem of serious consideration.

Dr. Culley suggests a reduction in fees. He feels that surgeons over-charge in their work. May I ask him if surgeons charges today are not proportionate to the other items of the cost of living?

Dr. Rappleye of New Haven, Conn., in a discussion of medical economics in the Journal of the A. M. A., shows that the per capita per family sums up as follows: Patent medicines and drugs, $25.00; physicians, $24.00; hospitals, $15.00; nurses, $8.00; dentists, $6.00; automobiles, $150.00; tobacco, $67.00; candy, $37.00; gasoline, $37.00; entertainment, $35.00; soft drinks, ice cream, $34.00; and so on.

The question that arises in my mind, is not the health of any individual more important than his pleasures? Without health, pleasures or nothing else would be of any value.

The average case of appendix operation, surely ought to be worth $100.00 to the patient and to the surgeon. When compared to other expenditures, I should feel such a fee would be reasonable; still Dr. Culley received $2.50 per case for his services.

What is wrong? Something must be wrong somehow and some where. As altrustic as the medical profession may be, these men and women who constitute it must live and support their families, just as any other profession or trade must do. Where do you find any other business or profession giving away one-half million dollars a day in free services. None I can find.

The cost of medical education, the length of time, the cost of practicing has increased enormously, and still we are making no progress on the economic side of medicine.

Something is wrong, and we are, ourselves, the guilty parties. We must put our house in order. Our standard of medical ethics and economics must be made to fit a modern world, a modern people, modern transportation and so on down the line, if we expect to continue to move forward and progress as we should; or we cannot continue to carry on the high standard of services, under such conditions.

The average earnings of doctors in the United States are about $650.00 and if such is true, it behooves the medical profession to think seriously of the future.

Lucien S. Gaudet, Natchez.

FROM DARKNESS TO LIGHT.

The following counties dark so far as their county editors were concerned last month, become white in this issue: Amite, Choctaw, Copiah, Monroe, Neshoba, Oktibbeha, Pike, Prentiss, Sharkey, Webster, Wilkinson, Winston.

ADAMS COUNTY.

Dr. Edwin E. Benoist, accompanied by his father, L. A. Benoist, attended the twenty-first Annual Clinical Congress of the American College of Surgeons at New York. Dr. Benoist received the fellowship degree at this congress.

Miss Allene Dicks recently left for Waterproof, where she joined Miss Watson and her niece Miss Miriam Watson. Together they motored as far as Birmingham. Misses Dicks and Watson continued their trip east by rail. Miss Dicks will enter Columbia University to study for her M. A. degree and Miss Watson will be a member of the school faculty at Mount Vernon, New York.

Miss Cora Garrison, a recent graduate nurse of the Natchez Sanatorium, is now pleasantly located in the home of the Misses Bahin in Main street.

Miss Audrey Quirn of Brookhaven, was a recent house guest in the home of Dr. and Mrs. J. W. Chisolm.

Mrs. W. C. Pool of Cary, was a guest in Natchez on October 7, while attending the annual meeting of the Eighth Councillor's District Medical Society.

Dr. and Mrs. J. W. D. Dicks and son, Mr. George Dicks, left on October 13 for Nashville, Tenn., where Mr. Dicks will enter Vanderbilt University. Dr. and Mrs. Dicks went from Nashville to Old Hickory, Tenn., for a visit to their son-in-law and daughter, Mr. and Mrs. Lyman Darling.

Mrs. Ethel Marsh had the honor of receiving one of the two scholarships given by the Commonwealth Fund to attend the Western Reserve University in Cleveland, Ohio. Mrs. Marsh will take a four months' course in public health work.

Mrs. Nita Beer who has been visiting for the summer with her brother-in-law and sister, Dr. and Mrs. Philip Beekman, has returned to New Orleans.

Dr. Alphonse Meyer of Memphis, who attended the Eighth Councillor's District Medical Society at Natchez on October 6 was warmly welcomed by a large circle of old friends in Natchez, the former home of the family.

WOMEN'S AUXILIARY.

The organization of the Women's Auxiliary of the Homochitto Valley Medical Society was perfected on October 7 at a meeting in Natchez. The following officers were elected:

President, Mrs. C. E. Mullens, Bude.

Vice-president, Mrs. L. S. Gaudet, Natchez.

Second Vice-president, Mrs. W. K. Stowers, Natchez.

Secretary and Treasurer, Mrs. J. C. McGehee, Bude.

The meeting was called to order with Mrs. R. D. Sessions, Natchez, acting as temporary chairman. Dr. Loren Wallin, director, Adams County Health Department, addressed the ladies in behalf of the Homochitto Valley Medical Society and urged the wives of the physicians to organize.

Mrs. W. C. Pool, Cary, second vice-president of the Women's Auxiliary of the Mississippi State Medical Association, spoke on the work of the State Auxiliary and of the assistance given by it to the State Tuberculosis Association.

Dr. John C. Culley, Oxford, president of the Mississippi State Medical Association, urged the wives of physicians to encourage their husbands to take an active interest in the State Association and the fight on State medicine. He pointed out the difficult position that the physician occupies before the public. "Everyone thinks the doctor is the richest man in the community, and he is the first one they seek out when they wish to borrow money. It does not ocur to them that the physician has difficulty in collecting his bills, and that if he is not willing to respond to all demands for his services, the public is ready to condemn him."

Charter members of the Auxiliary include Mrs. R. W. Brumfield, Gloster; Mrs. W. K. Stowers, Natchez; Mrs. W. H. H. Lewis, Fayette; Mrs. R. D. Sessions, Natchez; Mrs. Marcus Beekman, Natchez; Mrs. L. S. Gaudet, Natchez; Mrs. L. Wallin, Natchez; Mrs. W. H. Aikman, Natchez; Mrs. A. J. Kisner, Natchez; Mrs. J. A. Rayburn, Natchez; Mrs. Philip Beekman, Natchez; Mrs. J. S. Chisolm, Natchez; Mrs. Raymond Smith, Natchez; Mrs. C. E. Mullens, Bude.

EIGHTH COUNCILOR'S DISTRICT.

The second annual meeting of the Eighth Councilor's District Medical Society was held in Natchez on October 7. The Pike County Medical Society, the Tri-County Medical Society, and the Homochitto Valley Medical Society were all well represented and many of the members brought their wives with them to attend the organization of the Women's Auxiliary of the Homochitto Valley Medical Society. The program opened with a dinner in the roof garden, Eola Hotel, at noon. Following this the program included:

A Word of Welcome.—Honorable S. B. Laub, Mayor of Natchez.

Response.—Dr. W. H. Frizell, Brookhaven.

Address.—Dr. J. W. D. Dicks, Natchez, Councilor of the Eighth District.

The Community Hospital.—Dr. John C. Culley, Oxford, President of the Mississippi State Medical Association.

Medical Education in Mississippi.—Dr. P. L. Mull, University, Dean of the University of Mississippi Medical School.

The Surgical Significance of Splenomegaly.—Dr. Isadore Cohn, New Orleans, La.

Constitutional Symptoms of Gynecological Origin and Treatment of Causative Conditions.—Dr. Thomas B. Sellers, New Orleans, La.

A Case of Bow Legs (moving pictures).—Dr. Alphonse G. Meyer, Memphis, Tenn.

The officers of the Society are Dr. J. W. D. Dicks, Natchez, president, and Dr. Lucient S. Gaudet, Natchez, secretary. The committee in charge was made up of the following: From Pike County Medical Society, Dr. I. E. Stennis, McComb and Dr. R. H. Brumfield, McComb; from the Tri-County Medical Society, Dr. F. E. Collins, Brookhaven and Dr. O. N. Arrington, Brookhaven; from the Homochitto Valley Medical Society, Dr. Lucien S. Gaudet, Natchez, and Dr. William K. Stowers, Natchez.

Among the guests of the Society at this meeting were Past Presidents of the Mississippi State Medical Association, Drs. E. F. Howard and S. W. Johnston, both of Vicksburg.

L. Wallin, County Editor.

KING'S DAUGHTERS' HOSPITAL, GULFPORT.

Dr. E. C. Parker attended the meeting of the American College of Surgeons in New York, October 12-17.

Dr. C. A. McWilliams attended the convention of the American Academy of Ophthalmology and Otolaryngology at French Lick Springs, Indiana, September 14-18.

Dr. E. D. Gay, Gulfport, married Mrs. Lorine Badgley Brown at Salt Lake City, Utah, on September 27. Dr. Gay will locate in Gulfport.

The Harrison-Stone-Hancock Counties Medical Society met at the King's Daughters' Hospital, Gulfport, on October 7, with 31 memebrs present. Dr. Joe P. Evans discussed "Dysentery in Children." Refreshments were served by the hospital personnel.

Mrs. Grace Moss, R. N., Superintendent.

GEORGE C. HIXON MEMORIAL HOSPITAL.

The regular meeting of the George C. Hixon Memorial Hospital staff of Electric Mills, was called to order Friday, September 25, by Dr. A. M. McCarthy, surgeon in charge. Dr. McCarthy announced a complete change in personnel of his staff, the new members being Dr. Charles E. Baldree, Jr., who is assistant surgeon and obstetrician, and Dr. James LeRoy Hasie, formerly of Memphis, Tenn., who is in charge of the division of pediatrics and internal medicine.

Dr. McCarthy announced that the hospital's laboratory was now capable of doing any kind of work requested, including routine blood and urinalysis, in addition to blood chemistry determinations, metabolic rates, Wassermann and Kahn reactions, all serological and bacteriological cultures and smears, and tissue diagnosis, macroscopical anl microscopical as well. The laboratory meets the requirements of a much needed department in our hospital, and will enhance the type of work done here in the future.

The laboratory is in charge of a competent technician, who is a graduate technician and a registered nurse as well, and who has had several years experience in the larger hospitals of the east. She succeeds the late Miss Helen Davis, formerly in charge of the laboratory.

The secretary's hospital report for the month of August was read and accepted. The scientific program for the evening was a case report given by Dr. A. M. McCarthy,—"An Unusual Case of Acute Appendicitis."

A. M. McCarthy.

WINSTON COUNTY.

The extreme health of the people here is giving the doctors a chance to talk "Hard Times."

There has been given a number of lectures on obstetrics at Houston, extremely fine, by Dr. McCord of Atlanta, Ga. It was the pleasure of Drs. W. W. Parks, R. L. Donald, W. W. Hickman, Bernard Hickman, M. L. Montgomery and E. L. Richardson to attend a part of them.

We are hoping to be 100 per cent strong from Louisville in attendance on October 8, at the meeting of the Medical Association in Meridian.

We had the pleasure of having Dr. Majures of Philadelphia with us at Rotary luncheon on September 30.

M. L. Montgomery, County Editor.

HOMOCHITTO VALLEY MEDICAL SOCIETY.

The fourth regular quarterly meeting of the Homochitto Valley Medical Society was held at Natchez on October 8. The following officers for the year 1932 were elected:

President, Dr. Paul Jackson, Liberty; Vice-president from Adams County, Dr. J. G. Logan, Natchez; Vice-president from Amite County, Dr. W. R. Brumfield, Gloster; Vice-president from Franklin County, Dr. C. E. Mullens, Bude; Vice-president from Jefferson County, Dr. W. H. H. Lewis, Fayette; Vice-president from Wilkinson County, Dr. C. E. Catchings, Woodville; Secretary-treasurer, Dr. W. K. Stowers, Natchez. Delegates to the Mississippi State Medical Association: From Adams County, Dr. E. E. Benoist, Natchez; from Amite County, Dr. W. R. Brumfield, Gloster; from Franklin County, Dr. D. P. Butler, McCall; from Jefferson County, Dr. W. H. H. Lewis, Fayette; from Wilkinson County, Dr. C. E. Catchings, Woodville. Alternates: From Adams County, Dr. W. K. Stowers, Natchez; from Amite County, Dr. Paul Jackson Liberty; from Franklin County, Dr. C. A. Everette, Bude; from Jefferson County, Dr. B. R. Clark, Lorman; from Wilkinson County, Dr. C. E. Catchings, Woodville. Board of Censors: Dr. J. C. Rice, Natchez. Medical Defense: Dr. J. S. Ullman, Natchez.

Dr. R. J. Field presented a paper entitled "Postoperative Complications," which was discussed by Drs. Sessions and Rice.

W. K. Stowers, Secretary.

PRENTISS COUNTY.

Dr. W. H. Sutherland, Booneville, left for New York City on October 10 to attend the Clinical Congress of the American College of Surgeons, after which he attended the International Postgraduate Assembly at Milwaukee.

The Prentiss County Doctors Credit Bureau met at the Northeast Mississippi Hospital, Wednesday night, October 7, with the following doctors pres-

ent: W. V. Davis, W. W. Strange, W. H. Sutherland, and R. B. Cunningham of Booneville, and R. B. Caldwell and Robert Christian of Baldwyn.

Dr. W. H. Anderson, Booneville, was in Oxford one day during the first week of October to assist in plans for the North Mississippi Medical Society gathering held there October 29. Dr. Anderson went from Oxford to Jackson to attend a meeting of the chairmen of the various sections of the State Medical Association.

H. B. Sutherland is now in Louisville, Kentucky, where he is a senior in the medical department of the University of Louisville.

Dr. Milton Adams has been missed from his work here among us. He is now at his father's home in Ripley where he is convalescing from a serious illness and operation.

It is a great pleasure to welcome to our midst Dr. Robert Christian, formerly of Amory, who has now located at Baldwyn. Dr. Christian is a splendid gentleman and an able practitioner.

R. B. Cunningham, County Editor.

WILKINSON COUNTY.

Dr. W. I. Marsalis was confined to his home recently because of a large carbuncle on his neck. I am glad to report that he is improving and expects to be out again in a few days.

We have been enjoying a series of medical meetings. Dr. Charles E. Catchings and Dr. S. E. Field attended the meeting of the Eighth Councilor's District Medical Society in Natchez on October 6. This meeting was well attended and a most excellent program presented. It was thoroughly enjoyed by all.

Dr. C. E. Catchings and Dr. S. E. Field attended the Bi-Parish meeting of the East Louisiana State Hospital at Jackson, Louisiana, October 7. Dr. R. J. Field was to have appeared on this program but was prevented from attending by one of those conditions which may not be postponed, a labor case. His paper was read by Dr. S. E. Field.

At this meeting, Dr. Glenn Smith, superintendent of the East Louisiana Hospital and host for the meeting of the Sixth District Medical Society of Louisiana, invited the members of the Eighth Councilor's District Society of Mississippi to be present October 14. Governor Long will address the Society and they have prepared a splendid scientific program. We are hoping that Mississippi will be well represented.

Dr. C. E. Catchings and Dr. R. J. Field attended the regular meeting of the Homochitto Valley Medical Society at Natchez, October 8.

Hope the above news will bring Wilkinson back from darkness to light.

S. E. Field, County Editor.

BAPTIST HOSPITAL, JACKSON.

The first meeting of the Baptist Hospital Staff after the summer vacation was held Tuesday night, October 6.

Superintendent Alliston made a brief talk in which he thanked the staff for their loyalty and co-operation, and assured them that every facility for work and service at this institution will be provided.

Dr. Shands was called on and asked to give a report of his vacation, spent in California and Oregon. He told of the work of some of the great clinics and surgeons in that section. His philosophical observations are always most interesting.

Mr. Parmerlee, in charge of the clinical laboratory and recently placed in charge of the roentgen-ray work also told of some of his vacation studies at Ann Arbor, and some recent developments along that line.

Dr. Noblin, county health officer, told of some recent work with the blanching test in the diagnosis of scarlet fever. He spoke of the difficulty in making differential diagnosis between scarlet fever and "septic sore throat" caused by other organisms, and how important from the standpoint of quarantine it is to make such a diagnosis.

Dr. Armstrong reported an interesting case of tetanus in which massive doses of antitoxin were given "by all routes,"—intraspinal, intraveneous and intramuscular. He made the observation that the later the symptoms of tetanus come on after the injury, the better the prognosis, and vice-versa.

Dr. Harris reported an unusual case of infection of the antrum which was not disclosed by roentgen-ray examination, but in which radical operation produced an enormous amount of pus.

Dr. Anderson reported an unusual case of tumor of the uvula, "half as big as a hen's egg," and discussed the occurrence of such things in general.

A letter from Dr. Wall advised of his return from Europe in a few weeks. He is on his wedding tour after his marriage to Miss King, superintendent of nurses at the Baptist Hospital. The staff is planning a pleasant surprise for them upon their return.

Dr. Underwood, president of the Southern Medical Association, is urging a full attendance of our doctors at the meeting in New Orleans November 18-20. A large majority of the doctors in Jackson will attend and several will take the special tour of the Canal Zone after the meeting.

T. J. Crofford.

AMITE COUNTY.

Dr. and Mrs. W. R. Brumfield, Gloster, motored to Natchez and attended the Eighth Councilor's District Medical meeting and Women's Auxiliary meeting held at that place.

Dr. W. R. Brumfield and Dr. Paul Jackson, Liberty, attended the regular meeting of the Homochitto Valley Medical Society at Natchez on October 8. Dr. Jackson was elected president of the society for the coming year.

Dr. C. W. Stewart, our county health officer, was at Liberty recently arranging for typhoid vaccinations.

Paul Jackson, County Editor.

SHARKEY COUNTY.

Mrs. W. C. Pool, second vice-president of the Women's Auxiliary of the Mississippi State Medical Association, spent October 6 in Natchez, attending the Homochitto Valley Medical Society luncheon.

Dr. W. C. Pool has returned home from the Vicksburg Infirmary and is at his office again.

Miss Abbie G. Hall, Sharkey County Health Unit nurse, is leaving this work November 1.

On October 20, the Sharkey County Unit of the Issaqueena-Sharkey-Warren Counties Woman's Auxiliary will entertain all of the members at a luncheon in Cary, at the home of Mrs. H. S. Goodman.

W. C. Pool, County Editor.

EAST MISSISSIPPI MEDICAL SOCIETY.

The East Mississippi Medical Society met at the Lamar Hotel, Meridian, Thursday, October 8, at 3 p. m. Thirty-five members and five guests were present. The following program was rendered:

Case of a Little Boy Four Years of Age with Cardiac Insufficiency.—Dr. W. R. Hand.

Discussed by Drs. W. H. Banks, Leonard Hart, J. E. Green and James Bennett.

Snake Bite.—Dr. P. E. Holladay, Meridian.

Discussed by Drs. R. G. Hand and J. E. Green.

Sodium Amytal as an Anaesthetic. Dr. K. T. Klein, Meridian.

Discussed by Drs. A. C. Bryan, Hickman, J. E. Green and J. S. Hickman.

Rheumatic Fever in Infancy and Childhood.—Dr. J. E. Green, Laurel.

Discussed by Drs. F. J. Underwood, A. C. Bryan and F. G. Riley.

Address.—Dr. F. J. Underwood, Jackson.

Discussed by Drs. Dudley Stennis, J. E. Green and J. T. Googe.

T. L. Bennett, Secretary.

CHOCTAW CLUB.

Notwithstanding the financial depression, all of our physicians are getting three square meals a day. Drs. Arnold, Reed, Tabor, and James attended Dr. J. R. McCord's obstetrical lectures which were given at Houston recently.

Dr. Reed's children are teaching this year, his son at Longview, and his daughter at Weir.

Dr. and Mrs. Tabor are alone at this time. Their older son has a responsible position at Starkville and the younger one in a school at Longview.

Wesley, the son of the writer, is in the University of Alabama this year.

J. James, County Editor.

HONOR ROLL FOR NOVEMBER.

Your editors express their appreciation of the aid and co-operation of the following interested people in preparing the Mississippi section of the present number of the Journal: A. M. McCarthy, Mrs. Grace Moss, M. L. Montgomery, W. K. Stowers, R. B. Cunningham, S. E. Field, T. J. Crofford, Paul Jackson, W. C. Pool, T. L. Bennett, J. James, J. W. Lucas, E. H. Jones, H. A. Gamble, J. S. Hickman, W. L. Little, R. P. Donaldson, R. H. Brumfield, W. H. Curry, E. F. Howard, T. M. Dye, D. W. Jones, H. L. Scales, G. S. Bryan, J. A. Rayburn, J. S. Ullman, Lucien S. Gaudet, F. J. Underwood, L. Wallin, J. A. K. Birchett, Jr., L. J. Clark, Mrs. W. C. Pool, '32.

HARRISON-STONE-HANCOCK COUNTIES MEDICAL SOCIETY.

Pardon my not reporting news and other items of the Harrison-Stone-Hancock Counties Medical Society for last month. There was little or no news other than our meeting which I failed to report.

Our November meeting is to be held at the United States Veterans Hospital in Gulfport, at which time we plan to have by invitation of the Society the members of the South Mississippi Society. This meeting will be of interest, I believe, to every practitioner of medicine in Mississippi, because the staff of the Veterans Hospital plans to give us a paper and review of mental cases that might be met with in one's general practice.

Our Society met on Wednesday, October 7, with 33 members present out of a possible 52. A most enjoyable and instructive paper was read by Dr. Joe P. Evans of Gulfport who selected as his subject, "Diarrhea in Children and the Method of Treatment With Hartman's Solution."

Since our meeting I regret to report the death of Dr. George A. McHenry of McHenry, full details of which I do not know other than that he has been ill for some time.

It is also my information that Dr. George Wallace of Biloxi has been elected a fellow of the American College of Surgeons and that both he and Dr. E. C. Parker of Gulfport are now attending the annual meeting which is being held in New York City. So far as I know this is the only news and doings of the day in the three counties which comprise our Society.

Cummings H. McCall, Secretary.

JOINT MEETING.

The annual joint meeting of the Fifth District Medical Society of Louisiana and the Issaquena-Sharkey- Warren Counties Medical Society will be held in Vicksburg on Tuesday, December 8.

The speakers will include: Dr. Chaille Jamison, New Orleans; Dr. Henry W. Meyerding, Mayo Clinic, Rochester, Minnesota, whose subject will be, "The Treatment of Arthritis With Special Reference to the Prevention and Correction of Deformity;" Dr. W. H. Olmstead, St. Louis, whose subject will be, "Secondary Enemia, Present Status of Dietary and Inorganic Therapy."

Every doctor in Louisiana and Mississippi is cordially invited to attend this meeting.

DEATHS OF MISSISSIPPI DOCTORS.

James Copeland, Tupelo, myocarditis, acute cardiac dilatation; at Tupelo, August 2, 1931. Born February 21, 1859.

Dr. W. W. Smithson, Jackson; Carcinoma of the liver and stomach; September 9, 1931, at Jackson. Born at Kosciusko, Mississippi, December 20, 1874.

Dr. J. W. Henderson, Clarksdale; September 10, 1931, at Clarksdale, Mississippi. Born 1877.

Dr. Rosa Douglas Wiss, Meridian; September 14, 1931, at Meridian, Mississippi. Born at Hodges, South Carolina.

Dr. George A. McHenry, McHenry. Born 1858. Louisville Medical College, 1893; licensed 1891.

BOOK REVIEWS

Simple Lessons in Human Anatomy: By B. C. H. Harvey, M. D. Chicago, American Medical Association. 1931. pp. 434, 244 figs. and frontispiece.

Dr. Harvey, professor of anatomy at the University of Chicago, has brought together in this volume a series of articles first presented in Hygeia, now modified by some rewriting and the addition of new material, both text and illustrations. The purpose of the original articles, and of the publication in book form, conforms to the design of Hygeia. As stated by Dr. Fishbein in the foreword: "It was thought that people interested in health might appreciate some knowledge of the structure of the body and of the way in which it works, and thereby be better able to comprehend methods of prevention of disease and of its treatment." The title describes very incompletely the true content of the work, and as a lure to prospective readers the book deserves a more attractive and compelling title. The "Simple Lessons in Human Anatomy" are actually a treatment of dynamic human biology, the anatomical considerations only providing the requisite background for discussion of the mechanisms in operation. The book may be recommended to the lay reader as a story of the human body, filled with action and related in an interesting way. As reading in anatomy and physiology for nurses it will form an instructive supplement to the texts usually supplied. Errors in statements of fact, seemingly inevitable in books of this character, are few in number. It is regrettable that Haeckel's notorius plate showing the likenesss of embryos among purportedly different mammals should be resurrected.

HAROLD CUMMINS, Ph. D.

Chemistry for Nurses: By H. C. Biddle, A. M. Philadelphia, F. A. Davis Co. 1931. pp. 336.

In "Chemistry for Nurses," H. C. Biddle presents the result of considerable teaching experience. With its arrangement of material, its description of numerous laboratory experiments, its questionnaires and reviews of definitions, this will doubtless please instructors. The student will find in these 320 pages a multitude of useful and interesting facts, intelligently administered so as to enable her constantly to check up on her progress. For the ambitious one, there are hints and suggestions in the "Topics for Reports" which will lead her deep into a science which at present is not exceedingly popular among hospital people. A suggestion or two the author might consider. The rather detailed treatment of the ionization theory and the excursion into the electron theory could be much shortened and the latter dropped altogether. Subjects of this kind which cannot be adequately treated on limited space serve to confuse the student and thus contribute to the above mentioned deplorable unpopularity of chemistry. They could easily make room for a more thorough treatment, mostly descriptive, of the important drugs, *i. e.*, the alkaloids, the synthetic ones of the veronal group (which are not mentioned at all in this edition), chemicals which every day place so much responsibility into the hands of the nurse. There is no reason why in this treatise, as in ordinary elementary textbooks of chemistry, the carbon compounds should be neglected for the benefit of physical and mineral chemistry. Little flaws, *e. g.*, the opinion that the so-called atomic weights are not based on hydrogen: 1:00 where as a fact, they are calculated on oxygen: 16.000, and the statement that chloroform burns which it does not, can easily be corrected and do not affect the value of the book, which as a whole will certainly be welcomed by the profession.

J. J. HAHN-KORFF.

Proctoscopic Examination and the Treatment of Hemorrhoids and Anal Pruritus: By Louis A. Buie, B. A., M. D., F. A. C. S. Philadelphia, W. B. Saunders Co. 1931. pp. 178.

This is an excellent monograph written in Buie's characteristic clear and concise style. The illustrations are plentiful and well selected. Superfluous material and discussions are omitted and only those procedures practiced by the author are emphasized, for having used them, he has found them thoroughly practical and entirely satisfactory.

MAURICE LESCALE, M. D.

What the Public Should Know About Childbirth: By W. B. Gossett, M. D. Minneapolis, The Midwest Co. 1931. pp. 290.

This book presents many interesting notes on ancient obstetrics and modern superstitions. On the other hand, the public probably would not be interested in the large mass of statistics that Dr. Gossett gives in regard to maternal mortality. The treatment of obstetrical analgesia, while discussed with liberal quotations, represents a personal opinion. Furthermore, few readers will agree with Dr. Gossett's thesis that cesarian section should be performed by an abdominal surgeon rather than even a trained obstetrician.

ARTHUR G. KING, M. D.

A Textbook of Laboratory Diagnosis with Clinical Applications for Practitioners and Students: By Edwin E. Osgood, M. A., M. D., and Howard D. Haskins, M. D. Philadelphia, P. Blakiston's Son & Company, Inc. 1931.

The object of this work is to furnish the fullest information from laboratory sources necessary for every graduate of a modern medical school to possess. The authors do not attempt to exhaust the subject, discussing only the material they consider most practical and essential. Plenty of references are given so as to allow further investigation. This work is clear and concise and furnishes not only essential text material but also easy reading. Sufficient clinical application is cited, especially in Part I, to allow the student to grasp the practicability of the procedures. The excerps of the basic sciences are in accord with the reviews of an improved text, since it keeps continuously before the student fundamentals which are necessary in order that he may better grasp the subject. Part II deals with laboratory methods and recent improvements of the same. In a very helpful index laboratory procedures of importance in disease and disease syndromes are listed. The text has many excellent illustrations of especially merit those of blood cells. Both graduate and student of medicine will find this text excellent reading, a ready reference and a practical guide.

J. W. WILLIAMS, M. D.

Clinical Diagnosis by Laboratory Methods: A Working Manual of Clinical Pathology: By James Campbell Todd, Ph. B., M. D., and Arthur Hawley Sanford, A. M., M. D. Philadelphia, W. B. Saunders Company. 1931. pp. 765, with 347 illus. 7th ed.

It is now twenty years since the first edition of this book left the press. Since that time Dr. Todd has passed on and an enlisted associate, Dr. Sanford, has carried on the work along the same general line. He has in this, the seventh edition, attempted to bring the work up to the times by omitting certain obsolete methods and adding newer procedures. The newer methods include Corper and Uyei's method of cultivating the bacillus of tuberculosis; Fairhall's method for the determination of lead; Folin's recent method for the precipitation of protein from blood and body fluids; his modified method for determination of uric acid in the blood and his revised copper solution for the determination of blood sugar; Clark and Collip's method for determination of calcium; the technic of the Keith, Rowntree and Geraghty methods of determining blood volume and plasma volume: the alcohol meal: the gastric reaction to histamine; the Gregersen test for occult blood; a discussion of the Asheim-Zondek test for pregnancy and other procedures. The text is primarily designed for students and the material was originally an outgrowth of the notes of Dr. Todd. It is an excellent text and a ready reference.

J. W. WILLIAMS, M. D.

Treatment of Skin Diseases in Detail: By Noxon Toomey, M. D., B. A., F. A. C. P. St. Louis, Lister Medical Pr. 1930. pp. 512.

This book by Toomey is one of the best I have ever read. Diagnoses and treatments are well laid out. The only adverse criticism that can be made by some physician is, that it is not illustrated.

JOHN A. DEVRON, M. D.

Tables of Food Values: By Alice V. Bradley, B. S. Peoria, Ill., The Manual Arts Press. 1931. pp. 127.

From data contained in Bulletin 28, Superintendent of Documents, Washington, D. C., Sherman's Chemistry of Food and Nutrition, Rose's Laboratory Manual and Foundation of Nutrition, the University of Hawaii's Composition of Some Chinese Foods, several commercial companies reports on their own products, and the calculations of Sherman and Gettler, Alice Bradley has produced a number of fairly comprehensive tables of food values. The first part of the book contains average portions of commonly used foods. The second part is a repetition of the same foods in 100 gram portions. Recorded are the protein, carbo-hydrate, fat, calcium, phosphorus, iron, vitamin A, B, C, D, and E content, likewise each food's value as a bulk and the chemical reaction numerically expressed. Recipes accompany the tables.

A sketchy introduction gives some general rules concerning diet calculation and an explanation for the mineral shares and vitamin values as she expresses them.

For her completeness she is being commended. However, one cannot afford to overlook several glaring omissions. Thoroughly ignored is cocacola, 405,000 gallons of which are consumed daily in the United States. Likewise she does not mention beer or near beer, drinks which probably enjoy equal popularity. Her list of cheeses in inadequate. Certainly two commonly used cheeses, pimento and brick or American Swiss, deserve inclusion. One wonders too if her values for root beer are correct. It is difficult to believe that there is only 1.2 per cent hydrate in root beer taken as a beverage. Also, it might have been well to have listed some of the no value and very low value or slenderizing foods.

"For the diversion seekers" I offer two of Miss Bradley's dishes which were news to me: (1) Spaghetti salad; (2) alligator pear ice cream.

MAURICE SULLIVAN, M. D.

Practical Midwifery for Nurses: By Bethel Solomons, M. D., F. R. C. P. I., M. R. I. A. London, Oxford Univ. Press. 1930. Pl. pp. 354.

This is an excellent book, written by the able master of the Rotunda Hospital of Dublin. It appears to be designed for the mid-wife as well as for the nurse, and for the European mid-wife at that, and so contains more details regarding the practice of obstetrics than most American books.

The work is admirably fitted for the purpose for which it is intended. Explanations are simple and exact, the illustrations are excellent, and the diction is most pleasing. It can be highly recommended in every way as a text-book for nurses and nursing schools.

E. L. KING, M. D.

Easier Motherhood: By Constance L. Todd. New York, John Day Co. 1931. pp. 199.

This book is, as the publisher states, "the work of a lay researcher and directed to women": that is, it is designed to popularize the Gwathmey method of obstetrical analgesia among the laity, and the readers are urged to demand of their obstetricians that this method be employed. Favorable opinions from physicians and from women are quoted verbatim and in extenso. A list of various hospitals in which the method is employed to a greater or lesser extent is offered for the guidance of the expectant mother.

The book, then, is frankly a piece of propaganda, designed to bring about the adoption of this method of treatment by physicians, because of the demands of their patients. The disadvantages of the method are disregarded, and the impression is created that it is simple and easy, and absolutely safe, which assumptions are not entirely correct. The impression is also created that the Gwathmey procedure is not universally employed because of the indifference and inertia of the members of the medical profession. While this may be true in many instances, the reviewer knows that many expert obstetricians employ other equally satisfactory anesthetic or analgesic agents, and are not to be censored for preferring these procedures to the Gwathmey technic.

The author touches on the real points at issue, however, when she emphasizes the fact that the dignity of obstetrics as a special branch of medical science is not fully appreciated, and that too many cases are cared for by incompetent attendants. When this condition is remedied by the provision of proper facilities for rich and poor alike, and when cooperation of husband and wife in every particular, is the routine, the standards of obstetric practice will be raised, and the relief of the pains of labor will receive the attention it deserves. There is no doubt that there is great room for improvement, however, under the present conditions, and this book may help to attain this end, even though it manifests a spirit of impatience, which is somewhat out of place in a lay discussion of a technical medical subject.

E. L. KING, M. D.

Recent Advances in the Study of the Psychoneuroses: By Millais Culpin, M. D. (Lond.), F. R. C. S. (Eng.). Philadelphia, P. Blakiston's Son & Co., Inc. 1931. pp. 348.

Another volume of a recent "advances" series, this dealing with the psychoneurosis.

The historical outline is replete with authentic material and displays the result of much statistical and historical research. Well does the author declare that the study of psychoneuroses does not begin and end with the analysis of the individual. The psychoneurosis of the War are thoroughly explained and interpreted in the author's own manner, though certain ones still continue to exploit the term, "Shell Shock," which in my opinion is a misnomer and which the author concedes willingly may occur in civil life during peace as well as war time, the symptom complex being no different.

The author carries us through a corollary comprising terms, phrases and usages common to psychoanalysis. At one time he is bold enough to attempt to entirely discard the term "neurasthenia" without adding a replacement. In this he is positively guided from his ultra psychoanalytic viewpoint.

The psychoneuroses in industry is given a prominent part, another term for the psychology of aptitude and placement. He likewise makes a plea for a more thorough understanding and better teaching of mental hygiene which is quite essential as a step to the proper handling of the psychoneurotic.

The book comprises in part a brief abstract on psychotherapeutic clinics without definitely giving a resume of the technic and use in the various cases, the time required, etc.

The contents comprises a preface, twelve chapters and an index, very well written and given entirely from a psychoanalytic standpoint.

WALTER J. OTIS, M. D.

International Studies on the Relation Between the Private and Official Practice of Medicine, with Special Reference to the Prevention of Disease: Conducted for the Milbank Memorial Fund: By Sir Arthur Newsholme, K. C. B., M. D., F. R. C. P. Baltimore, Williams & Winkins Co. 1931.

The Milbank Memorial Fund turned to Continental medical practice for information which might shed light on some of the problems in preventive medicine in this country. The fund had found through certain of its activities here that the broader view of public health relations was becoming increasingly more necessary and they were fortunate in obtaining the services of Sir Arthur Newsholme to collect the facts and sum up the policies of European and private and official medicine. These international studies constitute the first two of three contemplated volumes and are primarily the records of the facts.

It is conceivable that Sir Arthur has accumulated much more information concerning the fourteen countries visited than he has been able to reveal in the five hundred pages alloted him. Although the subject matter has been so confined with excellent technic it is to be hoped that the fund will see its way to present a more detailed report at some future time.

Each national study concisely reviews the problems in its medical and health practices and presents the reader with a clear picture of the present status of medicine, its evolutionary stages and its future trends. Although the philosophic considerations are to be left to a future volume, Sir Arthur inserts timely remarks at such points as questions are most likely to arise in the mind of the reader.

All persons interested in health matters have here a new and useful reference book on foreign medical practice which must answer many of the questions we have been wanting to ask but did not know to whom to turn for the answer.

W. H. PERKINS, M. D.

Health on the Farm and in the Village: A Review and Evaluation of the Cattaraugus County Health Demonstrations with Special Reference to Its Lessons for Other Rural Areas: By C. E. A. Winslow, Dr. P. H. New York, The Macmillan Co. 1931. pp. 281.

In 1921 Cattaraugus county, New York, applied for aid under the offer of the Milbank Memorial Fund for a cooperative demonstration of the effectiveness of known health measures in a typical United States county. The application was accepted because this county satisfied the specifications embraced by the offer, and, of no less importance, already had an efficient public health service and an intelligently interested county health minded citizenry. The demonstration was opened in 1923 and Dr. Winslow surveys, reviews and sums up the efforts and results of the program from that date to 1929. The presentation through the eyes of the essayist produces a delightfully smooth reading account of what might easily have been tedious to even the most ardent seeker after facts.

Dr. Winslow has conscientiously and critically presented the results of an experiment in the treatment of a local problem and has added a valuable contribution to public health literature. The evaluation by a single individual of the results as a whole, and of the many specific problems met and attacked, appeals to the reader, both scientifically and in the aesthetic sense. The entire review is based on ascertained facts and the authority of the writer. When Dr. Winslow has appeared to be hypercritical or over-lenient, the conversant reader has already been supplied with sufficient information to permit of his own independent judgment.

This book is an exceptional "case record" in public health and is to be recommended as such with the added asset to its readability by the running comments of the author.

W. H. PERKINS, M. D.

Encephalitis Lethargica: Its Sequelae and Treatment: By Constantin von Economo. Translated and adapted by K. O. Newman, M. D. London, Oxford University Press. 1931. pp. 200.

This is a translation of a good work ably done. Its author was one of the pioneers in work on lethargic encephalitis and the pioneer to whom probably most credit is due for our present day concept of the disease. His style furnishes one with a simple, to-the-point and interesting resumé of work on the subject, nor does he fail to give proper credit in his exhaustive reference to other workers. Of prime importance, is his application of the findings of this disease to psychologists, many of the concepts of which science have been revolutionized by the findings in cases of lethargic encephalitis. The statement, "Every psychologist who in future attempts to deal with psychological phenomena such as will, temperament, and fundamentals of character such as self-consciousness, the 'ego,' etc., and is not well acquainted with the appropriate observations on encephalitic patients

and does not read the descriptions of the psychological cases in many original papers recording the several mental symptoms, will build on sand," expresses a point well taken. The author's historical survey is detailed and his discussion of etiology is interesting in lieu of its present understanding in respect to the disease. His pathological discussions are excellent and our ideas of the lesions present and of the possible location of the several centers discussed are refreshed and augmented. The intricate maze of sequelae is emphasized and the treatments holding forth most hope in relieving disease and sequelae are detailed. No man who is interested in psychological problems or in diseases of the central nervous system should fail to profit by reading this book.

J. W. WILLIAMS, M. D.

Clinical Dietetics: A Textbook for Physicians, Students and Dieticians: By Harry Gauss, M. S., M. D., F. A. C. P., assisted by E. V. Guass, B. A. St. Louis, C. V. Mosby Co. 1931. pp. 490.

This book presents the lectures given by the author on Clinical Dietetics at the University of Colorado School of Medicine. The discussion of the history of diet is well written and very interesting. From a practical point of view, however, the book leaves much to be desired. There are a good many misstatements and errors, for instance, on pages 48 and 442, we find this statement: "Liver is given in pernicious anemia because of its fat-soluble vitamin E and is the specific therapy." It is the missing amino acid complex that liver supplies for the pernicious anemia patient and not vitamin E, which is necessary for reproduction in lower animals. The author obtained this idea from Kosseler's work which was concerned with a vitamin deficiency in this disease, but later work of Cohn and coworkers, and West and Dakin in New York, shows that this missing factor is either a nitrogenous base or a dipeptide of two amino acids of the protein molecule, hydroxy glutamic acid and hydroxy proline. Several other erroneous points of view are given in subsequent chapters.

In the discussion of the necessity of roughage the author does not consider Alverez's most recent studies on the subject. Too much attention is paid to the dietary factors in gastrointestinal diseases and some of the case reports indicate that the therapeutic results were due to other factors of treatment.

One of the most serious errors from a nutritional point of view is given in the following statement: "By the expression of normal diet we desire to indicate a diet that will satisfy the normal physiologic needs of the body, while the customs of the person are disregarded." This statement will not be accepted by most serious students of nutrition. It is well known that different species of animals have different nutritive requirements, both qualitatively and quantitatively. Likewise, in man, the customs and habits of different races of people are also very important factors in their nutritive wellbeing. The palatability of diet is also not considered, a fact of first importance to the average layman.

It would seem, therefore, that this edition, while serving to again emphasize the importance of diet in clinical medicine, does not contribute nearly as much to the subject of clinical dietetics as the works of McLester or Harrop.

H. H. BEARD, M. D.

PUBLICATIONS RECEIVED.

Williams and Wilkins, Baltimore: The Foundations of Medical History, by Sir d'Arcy Powers, K. B. E., F. R. C. S. (Eng.). Surgical Pathology of Prostatic Obstructions, by Alexander Randall, M. A., M. D.

William Wood and Company, New York: Gynecology and Urology for Nurses, by Samuel S. Rosenfeld, M. D., F. A. C. S.

J. B. Lippincott Company, Philadelphia: Simplified Diabetic Management, by J. T. Beardwood, Jr., A. B., M. D., F. A. C. P. Surgical Pathology of the Diseases of Bones, by A. E. Hertzler, M. D.

The Macmillan Company, New York: Confessio Medici, by Stephen Paget, F. R. C. S.

J. W. Stacey, Incorporated, San Francisco: Health for Travelers, by Alfred C. Reed, M. D.

The National Research Council of The National Academy of Sciences, Washington, D. C.: Bulletin of the National Research Council.

SOUTHERN MEDICAL ASSOCIATION

THE PROGRAM.

Advanced proofs of the program of the Southern Medical Association have come to the office of the New Orleans Medical and Surgical Journal. Examination of this program suggests that the coming meeting of the organization should be the best meeting that it has ever held. Certainly the program is one that is interesting, stimulating and informative.

On Wednesday morning there is a general clinical session in the Municipal Auditorium at which time Dr. Felix Underwood will preside. This program is made up largely of presentations by men of high reputation, who have achieved a name and fame for work accomplished. Dr. H. C. Clark, Director of the Gorgas Memorial Laboratory of Panama, will speak on malaria. Dr. Edward H. Cary, President-Elect of the American Medical Association, will discuss glaucoma. Dr. Bedford Shelmire, Professor of Dermatology at Baylor, will speak on eczema, and Dr. C. W. Dowden, of Louisville, on secondary anemias and their treatment. Dr. C. W. Stiles of the United Public Health Service will give a clinical presentation on hookworm disease, and Dr. H. E. Conwell, Chief of the Orthopedic Service of the T. C. I. & R. R., will present a lantern slide demonstration of fractures of the spinal vertebrae. In the afternoon session, Dr. J. R. McCord, Professor of Gynecology and Obstetrics at Emory, will talk on prenatal care, and he will be followed by Dr. J. M. Finney, Professor of Clinical Surgery at Johns Hopkins University, who will lecture on some problems in abdominal diagnosis. Dr. Arthur Sprenger will then give a discussion on urological problems in childhood. Dr. A. Graeme Mitchell, Professor of Pediatrics, University of Cincinnati, has selected for his subject a consideration of some phases of nutrition in children, and Dr. Willard Bartlett will discuss a method of estimating the thyrotoxic state. Dr. M. T. Burrows, of Pasadena, Calif., will discuss some phases of cancer, and Dr. H. A. Gamble, of Greenville, Miss., will speak on some surgical problems of infection. The last two presentations in the clinical session will be talking moving pictures, the one having to do with suspension of the uterus, and the other on experimental gastroenterostomy, the first to be given by Dr. Harold Jones of Northwestern University, and the last by Drs. H. B. Kellogg and W. F. Windle, of the same university. General clinical sessions will also be given on Friday, the last day of the meeting, at which sessions the presentations will be made by New Orleans physicians.

The general session will be held Wednesday evening. Invocation will be by Right Reverend James C. Morris, Bishop, Diocese of Louisiana, and the addresses of welcome will be given by Dr. Emmett L. Irwin and Dr. S. C. Barrow. Dr. Arthur T. McCormack, of Louisville, will respond to these addresses of welcome.

The Surgeon General of the United States Army, Major General Robert U. Patterson, will deliver the main address of the evening, and after him will come the president's address. Major Patterson will speak on "The Earliest American Casualties in the World War," and Dr. Underwood's subject will be "Public Health in the Prevention of State Medicine."

Thursday and Friday will be devoted to the section meetings. The program for these meetings is most attractive. Not only are many well known Southern physicians to appear on these programs, but there will also be essayists from the North and West. Every branch of medicine will be represented at these section meetings. Medicine, surgery, pediatrics, gastroenterology, pathology, neurology and psychiatry, radiology, dermatology and syphilis, bone and joint surgery, obstetrics, gynecology, urology, ophthalmology and otolaryngology, are all specialties which are represented by the special sections. In addition to these, there will be a section meeting of railway surgeons, a meeting of the section on public health, a section of the National Malaria Committee, and the meeting of the American Society of tropical medicine. The section on medical education has also arranged a most constructive program, as has the Southern Association of Anesthetics.

Every day, in the morning, there will be a meeting in the Roosevelt Hotel of the Woman's Auxiliary to the Southern Medical Association. These programs will be relatively short, and will be fol-

lowed by the various entertainments that have been provided for the visiting ladies. Wednesday there will be a luncheon at 12:30 p. m. in the Roosevelt Hotel. That evening comes the President's Reception followed by a Grand Ball. On Thursday, a luncheon will be held at a half dozen or more of the famous French Quarter restaurants, to be followed by personally conducted sight-seeing trips through French Town. That evening a most elaborate entertainment has been provided by the Woman's Auxiliary to the Orleans Parish Medical Society in the Municipal Auditorium, with music by the Suburban Gardens Orchestra. On Friday, a trip to the Gulf Coast has been arranged.

For the athletic doctors, golf and trap shooting has been provided. For both of these two forms of athletic entertainment many and numerous trophies have been collected.

It is impossible to give more than a short sketch of all the program of the Southern Medical Association provides. The various presentations are so catholic in their breadth that it will be impossible for a medical man not to be able to find something on the program that will be of great interest to him. We again urge the members of the Mississippi State Medical Association and the Louisiana State Medical Society to attend this meeting. They will certainly come away from the meeting satisfied that they have learned, that they have had a pleasant time, and that they have met many interesting and delightful physicians.

IMPORTANT NOTICE.

To the Members of the Louisiana and Mississippi State Medical Societies:

November 18 will find the medicos of the South, with some visitors from other States, carrying on the meeting of the Southern Medical Association in New Orleans. This Association is too well known to need the feeble praise that we can give. Its section meetings are among the best in America. Its Journal, presenting the papers and discussions of these Sections, is full of choice mental pabulum. The personal ties made or renewed at such gatherings enrich the lives of those linked by them. Not to be overlooked is the charm of the old Crescent City which has come through war, disease and flood to prosper a little even at a time of world depression.

We address ourselves particularly to those not at present members, urging them to avail themselves of this opportunity to join and mingle with their fellows so as to enjoy advantages not available in any other way. Cut out the blank form below, fill it out, sent it; then come to the meeting!

Yours cordially,
Committee of Membership
E. E. Allgeyer
P. J. Carter
C. Grenes Cole
Geo. B. Collier
J. D. Rives
T. B. Sellers
Hermann B. Gessner, Chairman.

SOUTHERN MEDICAL ASSOCIATION—APPLICATION FOR MEMBERSHIP

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I desire to be enrolled as a member of the Southern Medical Association (which includes subscription to the Southern Medical Journal) for which I enclose $4.00 to pay the first year's dues. I am a member in good standing of the

.....County and.....State Medical Societies.

Name .....

City.....State.....

Street or Office Address.....

Fill out and mail with check to Southern Medical Association, Empire Bldg., Birmingham, Ala.